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MAKING GAMES FOR WII U

GUILLAUME BRUNIER, UBISOFT MONTPELLIER

"I can't say it's easier or more difficult to develop on Wii U versus other platforms. It's just different."

Just how developer-friendly is the new console? **page 6**

THE MECH'S GENERATION

Hawken has made its indie creators stars, but why did they make their PC FPS free-to-play?

30 UNDER 30

Develop's talent spotlight is back, shining a light on the young stars shaping the sector's future

REGION FOCUS: SCOTLAND

We take you on a tour of the UK's most northerly region, and look at why it's such a force in the industry

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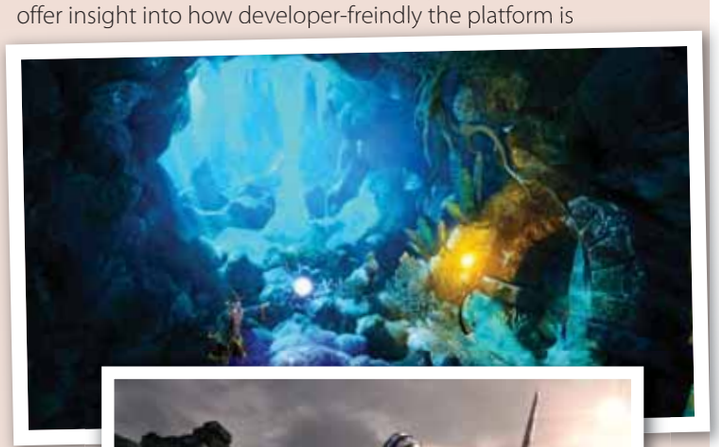

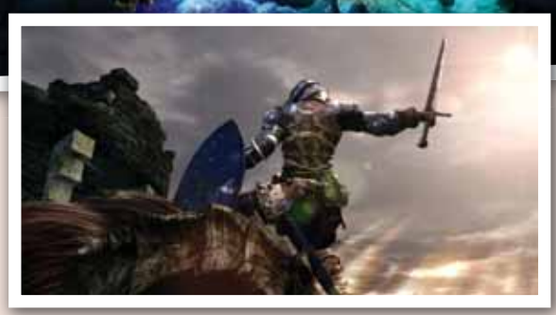

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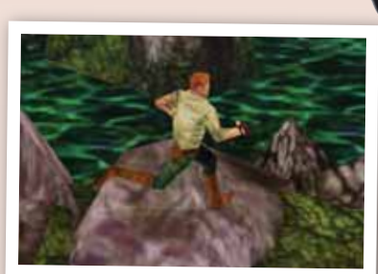

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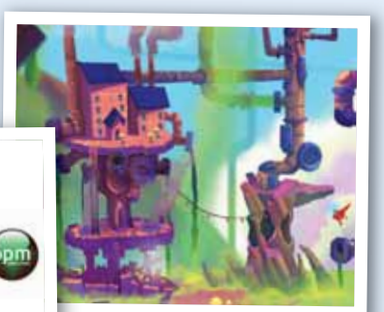

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"You have to have a firm idea of what your studio is going to be, but be willing to adapt. So I suppose that's the Scottish way: passionate pragmatism."
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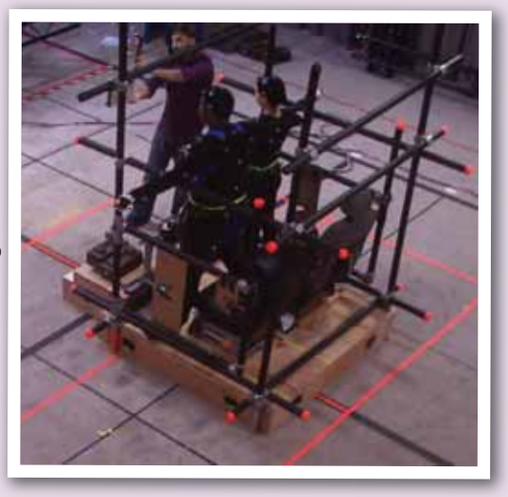

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STUDIOS, TOOLS, SERVICES AND COURSES

EDITORIAL

WII U. WILL U?

In the days before the publication of this magazine, the Wii U has been released across the world.

Early sales figures don't suggest a blazing success or total flop, but it's too early to call, with stock limitations and such to consider.

Either way, reports suggest the platform is being greeted by a somewhat bewildered public. And the Wii U has delivered a launch build-up with so little hype it makes you wonder if the consumer might have lost interest in the console form before the industry.

But there is a new console on the block. This is the dawn of the 'next' generation. Everything is meant to change from now. The Wii U should be the only industry talking point for a fortnight, and yet such conversation feels reserved to the studios already making games for the system, and the meeting rooms of publishers and marketers.

The reason for the understated welcome party thrown on behalf of the Wii U? It's hard to say precisely, but the usual culprits certainly play a part. While platform proliferation dizzies the consumer, free-to-play has reset what the public expects to pay for gaming, and, of course, mobile has shifted the market considerably since the day the original Wii debuted.

Fortunately, *Develop* has tracked down a number of studios that have worked on Wii U games, and asked them the important questions. How welcoming is the console's developer environment? What is Nintendo's support like? How does eShop treat indies? Turn to the next page to read their answers and find out if the Wii U is a system you'd like to make games for.

I'm open-minded about the console. It has potential, so let's hope we can squeeze that from it.

And if you're already bored of the Wii U, there's plenty else here for you. Meet some of the team behind 'indie triple-A' free-to-play mech FPS *Hawken* on page 19, take a visit to the Scottish development hub via page 28, see who made our 30 Under 30 from page 23, and spy into mo-cap's future on page 38.

Will Freeman
will.freeman@intentmedia.co.uk

Making Wii U games 'straight forward', insist chorus of devs

With the Wii U out in most territories, developers and technology companies are finally talking of their experiences with the console, and claim it's an inviting platform, whether you're an indie or triple-A giant

Top-to-bottom: Gabriel Liberty of GameBryo outfit Gamebase, and Guillaume Brunier of ZombiU studio Ubisoft Montpellier

by Craig Chapple and Will Freeman

WITH THE WII U now released across the globe, games developers and middleware outfits are finally sharing their experience of working with the system, and the reaction is thus far largely positive.

Launching in the US first, Nintendo sold 400,000 units in its debut week; a little shy of the 475,000 Wiis sold in the same period.

But if consumers are not entirely convinced by the system, developers appear happy with the platform and its development environment.

"From our perspective it's a great platform," states Tom Crago, CEO of Straight Right, which ported *Mass Effect 3* for the system. "It's very straightforward to code for, the GamePad integrates seamlessly into the development environment and everything more or less does what it says on the tin. We've been using the Unreal Engine for *Mass Effect 3*, along with one or two other bits of middleware and, for the most part, they've played nicely together too."

Others, while clearly pleased with the platform, expressed a more balanced perspective, but still insist the Wii U is no more trying than its rivals and forbearers.

"I can't say it's easier or more difficult to develop on Wii U versus other platforms," confirmed Guillaume Brunier, producer at *ZombiU* studio Ubisoft Montpellier.

> ***"From our perspective it's a great platform. It's very straightforward to code for."***
>
> Tom Crago, Straight Right

"It's just different," he added. "What was difficult was working on WIP hardware, but Nintendo has been very helpful about that. I think the real strength of the Wii U – its large memory – has yet to be exploited."

The key trial, numerous developers highlight, is giving the player a meaningful games experience while harnessing both the console's screen types. But while the system does present other challenges, positivity prevails.

BLAST OFF

"It's been a blast developing *Epic Mickey 2* for the Wii U," said Lyle Hall, president and CEO of Heavy Iron, which is porting the Junction Point game to Nintendo's latest console.

"Getting to work on a new console before its launch is very exciting, though it does come with some inherent challenges. Being so early in the hardware's lifecycle, especially pre-launch, can make some parts of development difficult when certain things are not working yet, but every new platform goes through that. Overall, the Wii U is certainly on par with the other platforms."

Independent studios making games for the platform are also optimistic, including the team at Frozenbyte, which released its title *Trine 2* on the Wii U eShop.

"Nintendo has been great to work with, so right now the eShop feels very accessible," stated Joel Kinnunen, vice president at the Finnish indie. "Nintendo allows us to self-

Ubisoft Montpellier's ZombiU emerged as one of the most keenly anticipated titles for Nintendo's newly released console (left)

publish, which is a big thing and very important. We've also been relieved that Nintendo isn't that concerned about the 'competitors', they haven't given us any demands when it comes to other platforms, and that's the kind of attitude the industry could use a lot more of. Overall, the eShop itself seems to combine many great features into a functional store and we're very excited about it."

And according to Kinnunen, while there is still a certification process for studios to wrangle with, it is "much faster" than that seen on the Wii U's contemporaries.

"The financial burden is basically non-existent," added Kinnunen.

AN EASY TOUCH?

Aside from having to adapt to creating games for a new console, Wii U developers are also faced with embracing a new controller, in the form of the console's touchscreen GamePad.

But again, developers report a satisfactory experience when shaping games to work with the Wii U's array of pad-based inputs.

"The GamePad has been extremely straightforward," claimed Straight Right's Crago. "I doubt there'd be a single developer who has had serious issues there in terms of integration. "And of course as more developers move onto the Wii U we're going to see cool new ideas and innovations. And there will be mistakes too, stuff we learn, things we should have done better."

Drawing parallels between the arrival of the GamePad and the evolution of the DS, Crago suggested that the new controller, in partnership with the console's developer environment, encourages an 'intuitive' understanding of gameplay mechanics that best serve the new interface.

"Sometimes that first wave of ideas needs tweaking and refining," he added. "A couple of years from now we'll be seeing the GamePad used in different ways I'm sure, and that's a fun thing to contemplate."

The first wave of Wii U developers have also universally praised the support offered directly by Nintendo, claiming that the industry giant has done much to ease the development process.

"They have been extremely supportive," said Ubisoft Montpellier's Brunier of Nintendo. "We met several times over the course of the project and were in regular contact both for technical and design questions. It was a real honour for the whole team to work so closely with a company that brought us so many gaming memories."

"Nintendo was very supportive and responsive whenever we needed help during development of *Epic Mickey 2* for the Wii U," added Heavy Iron's Hall in agreement. "They provided us with all the tools and guidance necessary to ensure we got the game looking and play great in time for launch."

TOOLING UP

Finally, with the Wii U now released more tools and middleware companies are beginning to reveal their plans for the platform. Unity was one of the first to confirm its support for Wii U and its distribution with the platform to studios (*see Develop 133*), but now others are speaking publically about supporting Nintendo's console.

"Unlike the Wii, the Wii U is powerful enough to take advantage of all of Gamebryo's features including our advanced lighting techniques," stated Gabriel Liberty, technical director at Gamebase, the organisation behind the Gamebryo engine, which was used by Heavy Iron in the porting of *Epic Mickey 2*.

"Our Floodgate multi-core technology will take full advantage of the multi-core hardware. The hardware is surprisingly similar to a PC, making it easy for us to cross-develop. The only unique technology is to support the Wii U GamePad."

Epic, meanwhile, has long supported the Wii U with its prolific Unreal Engine 3 tech, and has told *Develop* that for now it has no plans to serve the console through its upcoming Unreal Engine 4.

"Wii U is supported by Unreal Engine 3," said Mike Gamble, Epic's European territory manager. "The reason for that is that the Wii U happened to fall within the Unreal Engine 3 time frame.

"It was more about that timing than it was a decision based on hardware stats or console power or anything like that. It's because people started building games for Wii U 18 months or even two years ago, and so it had to be Unreal Engine 3."

Top-to-bottom: Frozenbyte's Joel Kinnunen, Heavy Iron's Lyle Hall, Epic's Mike Gamble and Tom Crago of Straight Right

//COMMENT: STUDIO MANAGEMENT

Core skills

Al Bickham, The Creative Assembly

Dark Souls is a recent case-in-point for why developer should carry on making core games in the traditional mode, says Al Bickham

WHAT A CRAZY climate. The trade-winds blow toward mass-market free-to-play development; design-by-metrics, gaming as a service – even a utility – and staggering global audiences that drip enough pennies over time to fund a reasonably-sized dictatorship. It's a scary time to plough years of resources into a single core title, and the shifting wreckage of many legendary studios over the last couple of years throws the whole landscape into sharp relief.

Scary enough, in fact, without considering the storm that retail is rising. Take the bewildering array of marginally different SKUs studios are asked to provide in the name of retailer exclusivity, driven by the need of individual retailers to differentiate. Does the benefit of those extra man-months really outweigh the cost? Does it even benefit consumers? I'd argue it just adds to buyer confusion and annoyance that they're not getting the full package, simply because they buy from one retailer over another. Either way, it's an added complexity with benefits that are incredibly hard to define.

A RECIPE FOR RISK

Factor in the one-sided battle between blockbuster behemoths and the output of competent mid-size studios, and the recipe for risk is undeniable. If you want to know more about just how compromising that competition can be for a studio's vision, I urge you to go and read Rob Zacny's 'Death March' piece on Kaos Studios and the birth-pains of *Homefront* on Polygon.com. It's horrifying stuff.

So why do it? Why cling to the idea of the 'traditional' game? The tentpole release – 'fingers crossed for a corking marketing campaign and good reviews,' – that drives studios to differentiate within genres, to try and snag a little market share from the big boys, to experiment with new IP and hybrid genres? Why roll the dice on several years of intensive development when your players might, if the headlines are to be believed, wiffle off at any minute to where games cost a fraction per transaction and provide always-on entertainment? A recent case-in-point for why core games work is, *Dark Souls*.

It is relentlessly, insanely difficult by current standards. It kills the player again, and again, and again. It makes Dante's sixth circle of hell look like *In the Night Garden*, and I can't imagine anyone is quite as surprised as Namco Bandai at the enormous cult status and incredible critical reception it's generated. Plus, it was a respectable commercial success.

Dark Souls is an example of risk paying off; of a developer turning away from modern mass-market conceits and taking a serious lesson from the past: that the player's dexterity and burgeoning skills are the denominators of success. It runs counter to the current norm of blockbuster hand-holding, with easy-outs for both the player and the developer through quick-time events and other safety blankets which make it less likely that the player will die.

We understand that risk. The *Total War* games can be tough; play *Shogun 2* on Legendary difficulty, and you're in for a rough ride, as we hold your hand a lot less, and remove many of the gameplay crutches.

TOUGH STUFF

But we know from experience, these are the most satisfying games our players play. The ones that generate legendary stories: epic battles against the odds that echo through the forums the morning after. They're the ones that players remember.

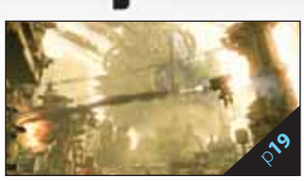
I don't want that to sound smug – getting it right is never easy. And it's not about simply ramping up the difficulty. It's about doing that in a smart way that always gives the player options.

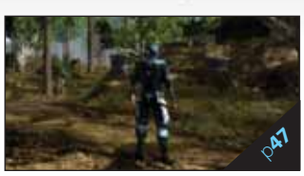
You need to give the player more options about how and when they face the fire – let them dictate the terms of engagement. Players aren't stupid, and they like a challenge. If that sounds like a risky attitude, it probably is. But in the long run, they'll thank you for it.

Al Bickham, is The Creative Assembly's studio communications manager. A former journalist, he stands in this month for *Develop*'s regular CA columnist Tim Heaton. **www.creative-assembly.co.uk**

develop iPad

Videos are available within the iPad Edition of **Develop** on iTunes and the Browser-based Digital Edition, which can be accessed at **develop-online.net**





THIS MONTH: Hawken's staggering teaser trailer that thrust the free-to-play PC game into the limelight **SKN3's crowdfunded 2D asset tool Objecty in action** Hero Engine's latest version

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//COMMENT: TRENDS

Bagpuss, British Bagpuss

by **Ana Kronschnabl,** Fluffy Logic

Photo by Ben Sutherland

Bagpuss, a quintessential English children's TV show, which reflects the UK's proposal for tax breaks. Games that don't fit the mould risk losing out

FOR MANY YEARS now I have followed the funding of the arts in their various forms and I am happy to include games in this category.

This means that I have been watching the government's movements on tax breaks pretty closely. Since they were first announced, earlier on this year, there have been statements from TIGA on how they intend to persuade the government to alter current plans to make them more inclusive of smaller companies. That's an aim I am in total accord with – not just targeted at supporting a specific, large multinational – and to make them more specific to gaming. For anyone who has ever applied for European funding another major issue will spring to mind; the length of time anything that goes to Europe takes to be agreed.

A TAXING MATTER

Currently it seems that there are two ways for the UK government to leap on these laws. They can either follow the current law on tax breaks for film, which are less pertinent to the industry but already agreed by Europe: which will mean that their movement through Europe will be much smoother. Or we can carve out our own tax breaks which, as with the French before us, will have to be approved separately – as I hinted above, the last thing we should do is implement similar breaks to the French. We should be supporting the whole industry as far as possible. This means that even if they are eventually approved, of which there is no guarantee, their journey is likely to be pretty long and painful.

The exact details of the law are currently under discussion. However, the concept of receiving a tax break based on Britishness is one that is still pertinent, and one that I must admit I find pretty intriguing. TIGA are arguing, as seems only right and proper, that "fictional settings and species to allow sci-fi, fantasy and non-narrative titles" be included in the test. This seems an obvious and intelligent thing to argue. If the game is set in Bristol then this becomes easier. However, if it is set in space but the characters have an English sensibility it becomes harder. Lets look at some example of this.

> ***"For these tax breaks to be of genuine use, and not just a list of targets that need to be shoehorned into a project, it needs to be run with genuine sensitivity."***

As a much respected and much loved filmmaker, Oliver Postgate would be seen as quintessentially English, and *Bagpuss* and *The Clangers* would be viewed in a very similar light. However, it is a much harder thing to explain. In fact, as I think about this, I am unsure as to how exactly I can justify this comment. So, here goes.

Is Oliver Postgate English enough? I feel I am probably on pretty safe ground here. In *Bagpuss*, Emily has a shop in which she displays all of the much loved but forgotten items that she finds. This shop is obviously English. Hmm, okay, I seem to have hit a problem already. I am not sure that it says this at any point in the narrative. The beginning of each episode describes Emily and her shop, it displays pictures of it and it feels very English, but it doesn't say so at any point in the voiceover. I guess that if I wanted to be really clear on this point I would have to mention that her shop is based in 'Little Heatherington' to score vital points on location. In *The Clangers*, this issue is even more obvious; the Clangers live in outer space, in caves.

SAFE WITH PROFESSOR YAFFLE

Lets move onto the English-ness of the content. Again, I think I am probably on safer ground with *Bagpuss* than with *The Clangers*. The characters in *Bagpuss* vary but they each have, what seems to me pretty English characteristics, for example Professor Yaffle the woodpecker is characteristic of a bespectacled English professor – based on Bertrand Russel, who Postgate had met – and Madeleine and Gabriele, the frog, often sing old English folk songs. Even the mice seem to be English-style mice. But it is a really hard thing for me to explain.

This seems to me to be at the crux of the issue. I know that when we wrote our proposal for a European games fund a few years ago we chose to write a specific idea. We looked at the requirements of the fund and wrote to these specifications, which certainly makes things easier. However, if this is not what you want to do, and you want to get your current game or idea funded, it becomes much harder.

It seems to me that for these tax breaks to be of genuine use, and not just a list of targets that need to be shoehorned into a project that has nothing what-so-ever to do with shoes, it needs to be run with genuine sensitivity and intelligence.

The truth is that we generally do know when something exhibits a British, English, Welsh or Scottish feel. Justifying this feeling is what is going to prove far more challenging.

Ana Kronschnabl is CEO and creative director at games and digital content studio Fluffy Logic, which has produced titles for a wealth of platforms across console, mobile and online. Fluffy Logic is currently at work on social game *UrZoo*. **www.fluffylogic.net**

//COMMENT: BUSINESS

One step forward? Mobilising PlayStation

by **Rick Gibson**, Games Investor Consulting

WHEN SCE EXCITEDLY announced PlayStation Suite in February 2011, it planned on bringing console-quality to non-PlayStation devices (Android smartphones), and delivering new short-form indie games to Vita. While detail was lacking, PSM intriguingly promised a semi-open platform for Sony software, leveraging Sony's back catalogue to reach new consumers. Renamed PlayStation Mobile (PSM), the beta launched in October this year. This month I'll explore PSM's strategy, benefits and potential.

PSM went live on Vita and some Sony smartphones and tablets. HTC was supposedly a launch partner but, awkwardly, technical issues at launch prevented PSM from working, a situation that, at the time of writing, persists. Other device manufacturers like Asus, Sharp, Fujitsu and Wikipad have been certified for future releases. The latter is the strangest licensor; a gaming tablet with detachable gamepad. Someone somewhere thought it was a good idea to work with a direct competitor for SCE's handheld consoles, a type of 'co-opetition' with companies nipping at Sony's heels.

PlayStation Mobile running on the Sony Tablet S. Gibson believes SCE needs to demonstrate a serious push for their mobile platform in the wake of Vita's slow start

PLATFORMS FOR SUCCESS?

Perhaps these strange semi-competitive bedfellows prompted Sony to cancel its back catalogue for non-PlayStation hardware. Now PS1 ports will only be available on Vita. Sony announced 85 companies developing PSM titles, many of them Japanese, a few large publishers/developers, and mostly small studios. Thirty titles launched, some exclusive to PSM, some PS Minis ports, and others ported from Android, iOS and Flash. HTC, when they eventually get PSM working, could be forgiven for feeling short-changed with only a small selection of nifty casual titles.

Developers pay $100 annually to access the PSM developer program and can build and release one SKU to all PSM-certified devices, which apparently works well for PSM-exclusive titles. Dev support and funding seems good, with lighter approvals for Minis. If suggestions that product quality will not be closely monitored are right, PSM will be lucky to avoid Xbox Live Indie Games' fate – numerous low-quality games obscuring the innovative titles. This is chicken and egg – stimulating microstudio innovation without quality controls – could damage PlayStation's brand, and low title volumes could marginalise PSM entirely. Sony hasn't yet grasped the discoverability nettle. PSM games are not searchable across the entire PS Store, and while that's fixable, PSM will inevitably get crowded, which brings into question how long Sony will maintain marketing support. Also, equalising the prices between PSM and Google Play versions of the same titles would help.

Huge games catalogues remind me of Kristian Segestrale's persuasive mantra from Playfish's early days: choices from friends' recommendations satisfy more than those from giant catalogues filtered by editors. It's no surprise to find social ignored by SCE, despite initially promising social features for PSM. But their subsequent omission may get increasingly problematic for developers. The lack of online functionality shows Sony has learned only some lessons from Minis. It solved the issue of relatively high cost SDKs and may have dampened Sony's endemic regional 'Not Invented Here' syndrome by spreading responsibility internationally. But like Minis, PSM developers get no online feature support and no Trophies. Worse, the apparent lack of integrated metrics tracking combined with an approvals process which allows patches to data but not executables seriously hamper iteration and data-driven production methodologies. While freemium is supported on PSM, the tools to make it work hard for studios appear not to be.

> ***"Sony must work harder to improve PSM's commercial potential and walk that fine line between enabling modern business models and guarding quality."***

A VERSION OF THE FUTURE

Sales projections are low as the addressable market is small, mostly restricted to Vita. While non-PlayStation hardware shipping with PSM should increase, the future for just another branded Android app store is less clear. Sony could learn from Verizon and Vodafone, which launched curated Android app stores. Despite preloading these app stores onto tens of millions of devices, they failed commercially and are now being closed, strongly suggesting limited demand for library curation in this open, high-volume market. Will Sony's brand be enough to counterbalance Google Play?

PSM sales volumes certainly aren't yet creating millionaire developers overnight but it may be a nice ancillary indie sales channel. Sony must work harder to improve PSM's commercial potential and walk that fine, tricky line between enabling modern business models and guarding quality. Arguably, the promise of mobile games with higher production values isn't yet fulfilled. After the back catalogue exploitation strategy was dropped, PSM could turn out to be simply a short-term tactic to make up for Vita's sluggish release list. Perhaps Sony is half-heartedly testing a more porous barrier to its closed platform, like it tested an online-only PSP. Let's hope PSM isn't another PSPgo.

Rick Gibson is a director at Games Investor Consulting, which provides commercial check-ups, strategy and data to games, media and finance companies.
www.gamesinvestor.com

//COMMENT: MOBILE

More money from your mobile game for $0, part 2

by **Will Luton**, Games Consultant

Luton sees Imangi Studios' Temple Run as an example of how non-game content, like device wallpapers, can help you get more from your mobile games

LAST MONTH I gave you eight thrifty tips on how you can generate more revenue from your mobile games with nothing more than time. This month I have nine more hot ones, primed and ready. The focus is again on both marketing and monetisation, dispelling the myth that the only way you can win is with a stack of money.

BUILD A COMMUNITY

Building a community is something that should start before launch and run through the life of the product. Typically offering early previews in the form of a beta test, through Test Flight, gets people buzzing about the game. It also has the added bonus of giving you great feedback and catching missed bugs. Create a dialogue with quality activity – not begging for retweets or posting old screenshots – on Twitter, Facebook and forums. Have a unique voice, show your passion – it will spread – and build stories about humans. Your customers are your biggest advocates. Exceed their expectations and they will do the same back.

CROSS-PROMOTE

Cross-promotion is a catch-all term for a wide range of activity, from simple link exchanges to complex character or theme swaps. The dev community is a fertile ground for creative approaches to the problems of discovery. Sharing players can be a brilliant way to keep them in an ecosystem of likeminded studios.

REFINE YOUR PINCH POINT

Controlling your consumable limited resource, such as virtual currencies, is essential to good monetisation. Adjusting when and how much you supply will have a huge knock on to your pinch point – where consumers worry about a resources security, boosting demand, which in turns effects your in-app purchase revenue.

All changes should be lead by analytics and direct comparison. If you can AB test or adjust over time, you will have hard data on which to base decisions.

> ***"Start building a community early. Your customers are your biggest advocates. Exceed their expectations and they will do the same back."***

ADVERTISING AND OFFER WALLS

Adding in either banner or interstitial adverts are brilliant ways to generate revenue for very little effort. However, it is well worth considering what impact it will have to a user's perception of your app, especially when mixed with IAPs or an upfront price.

If you have an existing virtual currency, or other consumable resources, then an offer wall is interesting. These request actions from a user, from watch a video to get an insurance quote, but in return reward with virtual currency. The developer gets bling-bling-cash-money.

UP YOUR BIGGEST IAP

The cheapest consumable in-app purchase in your game may do the most volume, but it is often the case that most revenue will come from one the highest priced IAPs. Adding another at the top-end can drag revenue up. Don't exceed the maximum spend of your game, however, as is likely to irk users who may feel you are charging them unnecessary for additional content.

NON-GAME CONTENT

You don't have to be Rovio to do merch. It can be as simple as a device wallpapers bought inside the game, as in *Temple Run*, or by setting up a no-risk print-on-demand store (see services Cafepress or Zazzle). If you have a dedicated fanbase, they'll be giddy to buy your character-endorsed G-strings.

PRODUCT PLACEMENT

If your game is already a big success you can look to brands to do some subtle advertising through product placement. Several companies exist to do make this happen. But, keep in mind the emphasis on subtly.

UPDATE IN PROGRESS

An update has a few magical properties and if timed and executed well can shift numbers in the right direction. Firstly, it draws back churned players via the App Store update notifications. It also clears negative reviews from previous versions; for example where bugs have hit, shows commitment, builds positivity, and in-turn the desire to reciprocat. And, with the use of an updated icon, can draw in new organic traffic previously blind to the old proposition.

FREE FREE GAME PROMOS

There's lots of big free app promotion sites out there that charge for placement. Others, however, can drive great numbers either totally free or free with strings. Of note is Daily App Dream.

WIN WITH BALANCE

Having the resources for a big user acquisition push puts lots in your favour, but you will only turn a profit if you use the money wisely by maximising profit and the effectiveness of your campaigns. Think holistically – each step of the process to the purchase needs to be efficient and to make your users happy before, during and after it. Uniquely, all these things cost only time and thought, so use both.

Will Luton is a games consultant specialising in design and free-to-play. Formerly he served at Sega Europe and award-winning boutique studio Mobile Pie. Follow Will on Twitter at @will_luton or visit **www.will-luton.co.uk**

THE MONTH AHEAD

A look at what December and January have in store for the industry and beyond

DECEMBER 4TH
Xbox 360 / MCV Xmas Quiz.
A Yuletide pub quiz from Xbox and *Develop*'s sister magazine, *MCV*. Bring your turkey suit.

DECEMBER 13TH
GWR Gamer's Edition 2013.
Gusiness's sixth round-up of gaming achievements. Did you make the cut?

JANUARY 1ST
New Year's Day.
Celebrate the triumphs of 2012, then look to the future as we ring in the New Year.

JANUARY 11TH
Anarchy Reigns.
Platinum's bonkers action game hits UK shores at last. Nega fans at the ready.

MobileGamingEUROPE

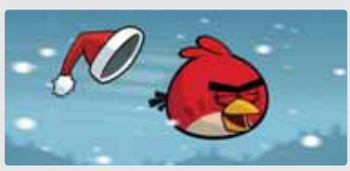
DECEMBER 6TH
Mobile Gaming Europe.
Discuss audiences, IP, monetisation and more at this conference for mobile gaming.

DECEMBER 14TH
The Hobbit. Peter Jackson returns to Middle-Earth to bring Tolkien's tale of dragon-thwarting to the big screen.

JANUARY 8TH
The Eyes of Bayonetta.
See Platinum's OTT witch in all her glory with this 244-page art book and DVD from Udon.

JANUARY 15TH
DmC: Devil May Cry.
Ninja Theory's emo-punk vision of Capcom's hack and slash antihero meets its public.

DECEMBER 11TH
Evolve in London 2012.
Cloud gaming, smart TVs and F2P are hot topics at this event for emerging technology.



DECEMBER 25TH
Christmas Day.
Saint Nick shuffles down the chimney again, while we all take a well-earned rest.

JANUARY 8TH
CES 2013.
Vegas hosts the tech industry's annual blowout. Expect big screens and even bigger RRPs.

JANUARY 25TH
Ni No Kuni: WOTWW.
Fabled animations gods Studio Ghibli team up with Level-5 for a spellbinding RPG.

DEVELOP DIARY

Your complete games development event calendar for the months ahead

DEVELOP QUIZ
January 30th
London, UK
www.develop-online.net/events

We're starting off the new year as we mean to go to on, with another floor-shaking Develop Quiz.

Almost a dozen studios, including Microsoft, Side UK, Bossa Studios, Big Head Games and a bunch more will be competing in a battle of the brains during an evening chocked with drinks, banter and quiz delights.

The Develop Quiz will take place on Wednesday, January 30th in London.

To book a place for you and your team at the next quiz, contact kathryn.humphrey@intentmedia.co.uk

DECEMBER 2012

XBOX 360 / MCV CHRISTMAS QUIZ
December 4th
London, UK
www.mcvuk.com/events

MOBILE GAMING EUROPE 2012
December 6th to 7th
London, UK
videogamesintelligence.com/mobile

EVOLVE IN LONDON 2012
December 11th
London, UK
www.evolveconference.com

JANUARY 2013

CONSUMER ELECTRONIC SHOW 2013
January 8th to 11th
Las Vegas, USA
www.cesweb.org

GAMEON: FINANCE 2013
January 17th to 18th
Ontario, Canada
www.gameonfinance.com

MOBILE GAMES FORUM 2013
January 23rd to 24th
London, UK
www.mobilegamesforum.co.uk

DEVELOP QUIZ
January 30th
London, UK
www.develop-online.net/events

FEBRUARY 2013

CAROLINA GAMES SUMMIT 2013
February 2nd
North Carolina, USA
www.carolinagamessummit.com

ICE 2013
February 5th to 7th
London, UK
ice.totallygaming.com

DICE SUMMIT 2013
February 5th to 8th
Las Vegas, USA
www.dicesummit.org

CASUAL CONNECT EUROPE 2013
February 12th to 14th
Hamburg, Germany
europe.casualconnect.org

SOUND + MUSIC AWARDS 2013
February 21th
London, UK
www.masawards.com

CLOUD GAMING EUROPE 2013
February 21th to 22nd
London, UK
www.cgconfeurope.com

MARCH 2013

GAME DEVELOPERS CONFERENCE 2013
March 25th to 29th
San Francisco, USA
www.gdconf.com

develop

The World's Best Game Studios

DEVELOP'S RANKING OF the world's most successful games developers is better than ever for 2012, providing a hugely valuable guide to the global games industry.

Now live in Apple's App Store, the latest edition of the *Develop 100* features a list of the top hundred developers in the world based on the revenues generated by their games.

It is available only for iPad, and costs just £4.99 for a volume overflowing with insight and data. That includes profiles on each of the 100 studios, sales numbers and statistics, as well as a wealth of background facts and analysis.

GfK Chart-Track data has been used to formulate the list. Chart-Track has the most accurate chart reporting tools on the planet, monitoring the sale of almost every game and peripheral sold anywhere and everywhere in the UK.

In 2012, EA Canada came out on top, beating the likes of Nintendo, Ubisoft Montreal, Infinity Ward and Traveller's Tales to the top spot.

The Canadian developer is one of this month's picks, and brought in a whopping £113.27m for its sports titles. Although mired in controversy, *L.A. Noire*'s defunct developer Team Bondi is a fitting addition because of its technical achievements.

And our list doesn't stop with the current 2012 volume. Buying the iPad *Develop 100* will guarantee you access to the other Top 100s we'll be launching in the coming months. Volume One is for retail sales, but we'll be adding lists for online, social and mobile standings in future.

Want to find out more?

The *Develop 100* is now available for £4.99 within the *Develop Magazine* app for iPad.

Download the *Develop Magazine* app now through the iTunes store.

£24.99m
Total UK revenue created in 2011 by Team Bondi alone

£200.01m
Total UK revenue created in 2011 by the Top Five studios in the Canada

»TEAM BONDI

UK RETAIL REVENUE IN 2011
£24.99m

»ABOUT
Founded: 2003 (now closed)
Independent
Location: Sydney, Australia
www.teambondi.com

»FAMOUS FOR
L.A. Noire

Despite being controversial for all the wrong reasons, including alleged issues around the mistreatment of its staff, the defunct Australian studio Team Bondi made one of 2011's most bankable games. *L.A. Noire* wasn't to everyone's tastes, but it was an undeniably popular release thanks to its technical finesse.

A textbook example of how advances in animation can complement and define gameplay, *L.A. Noire*'s use of sister company Depth Analysis' MotionScan tech gave it some of the best facial animation seen outside of cinema, and formed the basis of a fascinating character interrogation mechanic that charmed both reviewers and consumers. But it wasn't a big enough hit – the firm went bust shortly after *L.A. Noire*'s release.

STUDIO'S 2011 BESTSELLERS

	FORMATS	PUBLISHER	RELEASE DATE	TOTAL REV
L.A. NOIRE	XBOX 360	ROCKSTAR GAMES	MAY 2011	£14.31m
	PLAYSTATION 3	ROCKSTAR GAMES	MAY 2011	£10.69m
	TOTAL			£24.99m

100

Our monthly analysis of the data from the latest Develop 100 continues with a look at two teams bringing in millions

2012 Edition Volume 1

» EA CANADA

UK RETAIL REVENUE IN 2011
£113.27m

» ABOUT

Founded: Founded: 1983
In-house (Owned by EA)
Location: Burnaby, Canada
eacanada.ea.com

» FAMOUS FOR

Ultimate Team • EA Sports Football Club • iOS and free-to-play spin-offs

EA Canada continues its winning streak with another No.1 in the *Develop 100* for the fourth time in the book's eight year history. The primary driver for EA Canada is, of course, *FIFA*.

What its position doesn't show is *FIFA*'s massive strides in selling digital content. Ultimate Team, on console, adds a collectable card game element to the disc-based game; this year, the studio opted to put out its seasonal *UEFA 2012* as DLC for *FIFA 12*, not as a standalone disc; elsewhere, the game continues to grow its 'companion' audience on iOS and other digital devices. Even in South Korea, a free-to-play version is a commercial smash.

In all, EA Canada's value grows even higher, proving it out as the real flagship in EA's studio empire.

STUDIO'S 2011 BESTSELLERS

FIFA 12	XBOX 360	ELECTRONIC ARTS	SEP 2011	£46.89m
	PLAYSTATION 3	ELECTRONIC ARTS	SEP 2011	£39.64m
	SONY PSP	ELECTRONIC ARTS	SEP 2011	£1.20m
	3DS	ELECTRONIC ARTS	SEP 2011	£0.94m
	PLAYSTATION 2	ELECTRONIC ARTS	SEP 2011	£0.33m
	PC	ELECTRONIC ARTS	SEP 2011	£0.27m
	TOTAL			£89.27m
FIFA 11	XBOX 360	ELECTRONIC ARTS	SEP 2010	£6.71m
	PLAYSTATION 3	ELECTRONIC ARTS	SEP 2010	£4.11m
	WII	ELECTRONIC ARTS	SEP 2010	£0.95m
	PC	ELECTRONIC ARTS	SEP 2010	£0.11m
	TOTAL			£11.88m
FIGHT NIGHT CHAMPION	XBOX 360	ELECTRONIC ARTS	MAR 2011	£4.08m
	PLAYSTATION 3	ELECTRONIC ARTS	MAR 2011	£3.78m
	TOTAL			£7.86m
EA SPORTS ACTIVE 2	PLAYSTATION 3	ELECTRONIC ARTS	NOV 2010	£0.93m
	XBOX 360	ELECTRONIC ARTS	NOV 2010	£0.89m
	NINTENDO WII	ELECTRONIC ARTS	NOV 2010	£0.64m
	TOTAL			£2.45m
NHL 12	XBOX 360	ELECTRONIC ARTS	AUG 2011	£0.37m
	PLAYSTATION 3	ELECTRONIC ARTS	AUG 2011	£0.27m
	TOTAL			£0.64m

£89.27m

Total UK revenue for EA Canada's *FIFA 12* across all retail formats

£204.99m

Total UK revenue of the Top Five EA studios to make the *Develop 100* list

» THE 100 STUDIOS

DEVELOPER	COUNTRY
1ST PLAYABLE	USA
2K CZECH	CZECH REPUBLIC
343 INDUSTRIES	USA
AMAZE ENTERTAINMENT	USA
ASYLUM	UNITED KINGDOM
AVALANCHE SOFTWARE	USA
AVALANCHE STUDIOS	SWEDEN
BEHAVIOUR INTERACTIVE	CANADA
BETHESDA	USA
BIGPARK	CANADA
BIOWARE	CANADA
BLACK LANTERN	USA
BLIZZARD ENTERTAINMENT	USA
BLUE CASTLE GAMES	CANADA
BUNGIE	USA
CAPCOM	JAPAN
CAT DADDY	USA
CERASUS.MEDIA	GERMANY
CITY INTERACTIVE	POLAND
CODEMASTERS	UNITED KINGDOM
CODEMASTERS BIRMINGHAM	UNITED KINGDOM
CREATIVE ASSEMBLY	UNITED KINGDOM
CRITERION GAMES	UNITED KINGDOM
CRYTEK	GERMANY
DIMPS	JAPAN
EA BLACK BOX	CANADA
EA BRIGHT LIGHT	UNITED KINGDOM
EA CANADA	CANADA
EA DICE	SWEDEN
EA TIBURON	USA
EDEN STUDIOS	FRANCE
EIDOS MONTREAL	CANADA
EPIC GAMES	USA
EUROCOM ENTERTAINMENT	UNITED KINGDOM
EXIENT	UNITED KINGDOM
FIREBRAND GAMES	UNITED KINGDOM
FROM SOFTWARE	JAPAN
FRONTIER DEVELOPMENTS	UNITED KINGDOM
GAME FREAK	JAPAN
GEARBOX SOFTWARE	USA
GREZZO	JAPAN
GUERRILLA GAMES	HOLLAND
HARMONIX	USA
HB STUDIOS	CANADA
HEADSTRONG GAMES	UNITED KINGDOM
HEAVY IRON STUDIOS	USA
HIGH MOON STUDIOS	USA
ID SOFTWARE	USA
INFINITY WARD	USA
INSOMNIAC	USA
KAOS STUDIOS	USA
KONAMI DIGITAL ENTERTAINMENT	JAPAN
LAND HO!	JAPAN
LEVEL 5	JAPAN
LIONHEAD STUDIOS	UNITED KINGDOM
MEDIA MOLECULE	UNITED KINGDOM
MONSTER GAMES	USA
NAMCO	JAPAN
NAUGHTY DOG	USA
ND CUBE	JAPAN
NETHERREALM STUDIOS	USA
NINTENDO	JAPAN
OBSIDIAN ENTERTAINMENT	USA
PEOPLE CAN FLY	POLAND
PIPEWORKS	USA
POLYPHONY DIGITAL	JAPAN
RARE	UNITED KINGDOM
RELIC	CANADA
RETRO STUDIOS	USA
ROCKSTAR NORTH	UNITED KINGDOM
ROCKSTAR SAN DIEGO	USA
ROCKSTEADY STUDIOS	UNITED KINGDOM
SEGA	JAPAN
SIDHE	NEW ZEALAND
SLEDGEHAMMER GAMES	USA
SLIGHTLY MAD STUDIOS	UNITED KINGDOM
SONIC TEAM	JAPAN
SPLASH DAMAGE	UNITED KINGDOM
SPORTS INTERACTIVE	UNITED KINGDOM
SQUARE ENIX	JAPAN
SUCKER PUNCH	USA
SUMO DIGITAL	UNITED KINGDOM
TEAM BONDI	AUSTRALIA
TECHLAND	POLAND
THE SIMS STUDIO	USA
THQ SAN DIEGO	USA
TOYS FOR BOB	USA
TRAVELLER'S TALES	UNITED KINGDOM
TREYARCH	USA
TURN 10 STUDIOS	USA
UBISOFT CASABLANCA	MOROCCO
UBISOFT FRANCE	FRANCE
UBISOFT MONTREAL	CANADA
UBISOFT REFLECTIONS	UNITED KINGDOM
VALVE	USA
VISCERAL GAMES	USA
VOLITION	USA
YUKE'S	JAPAN
ZOË MODE	UNITED KINGDOM

REFLECTIONS

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BETA

DEVELOPMENT FEATURES, INTERVIEWS, ESSAYS & MORE

30 Under 30: The talent of tomorrow p23

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Metal gear

How Adhesive Games armour plated free-to-play and turned it triple-A, p19

Narrowing the gender gap p34

Region Focus: Scotland p28

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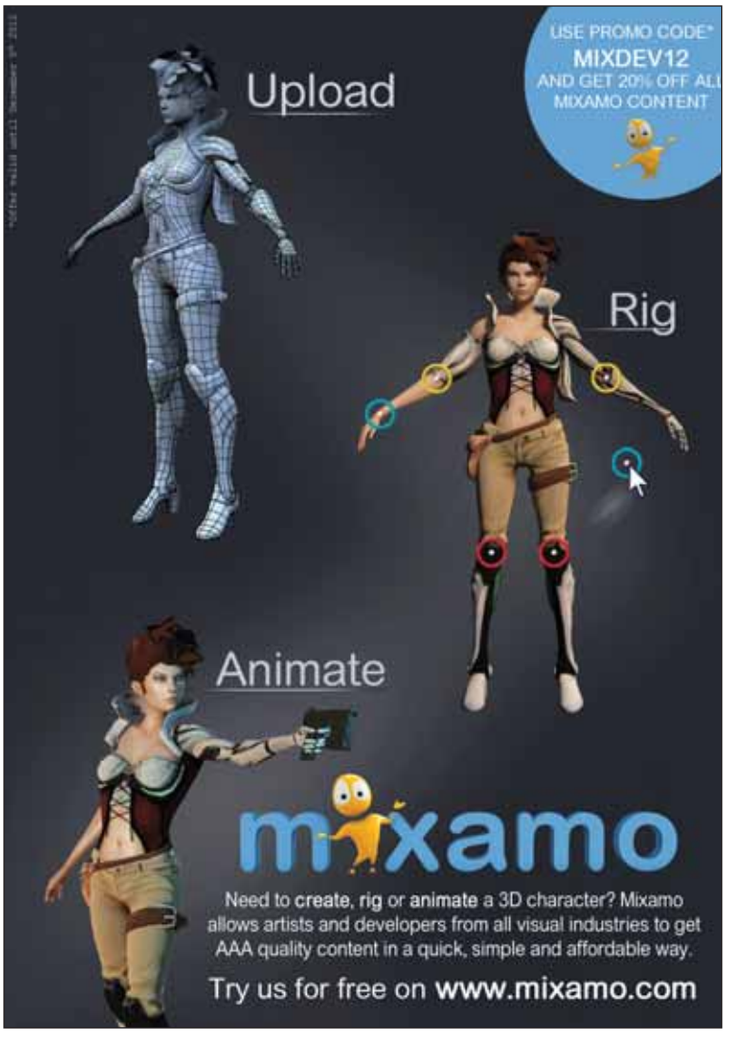
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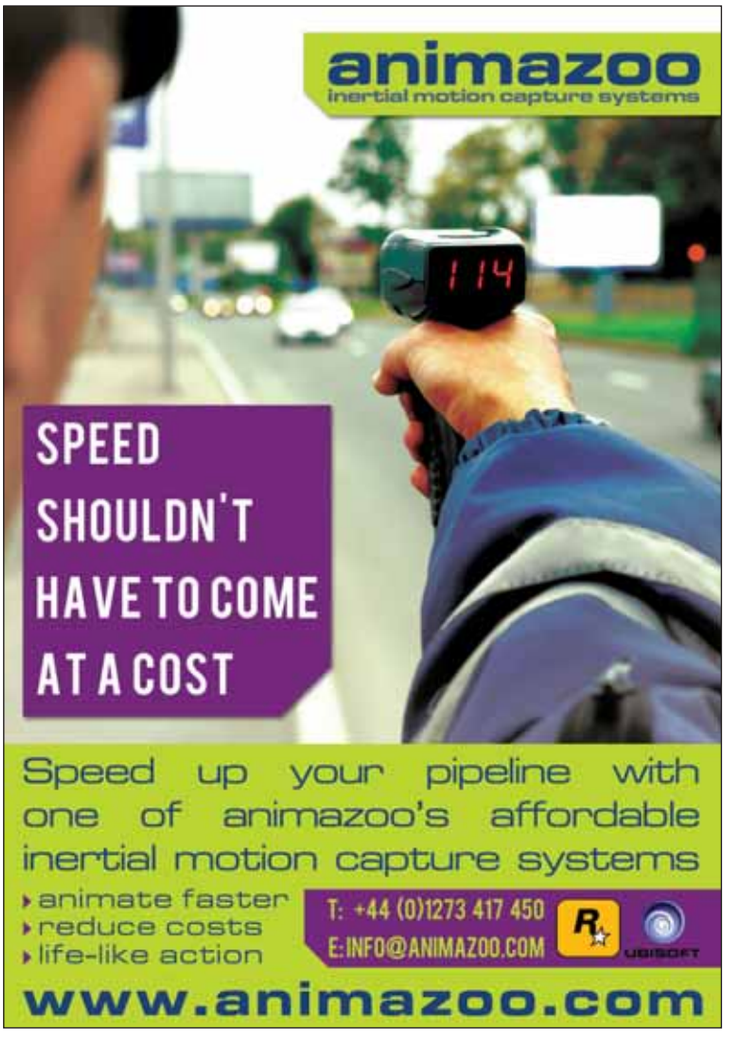

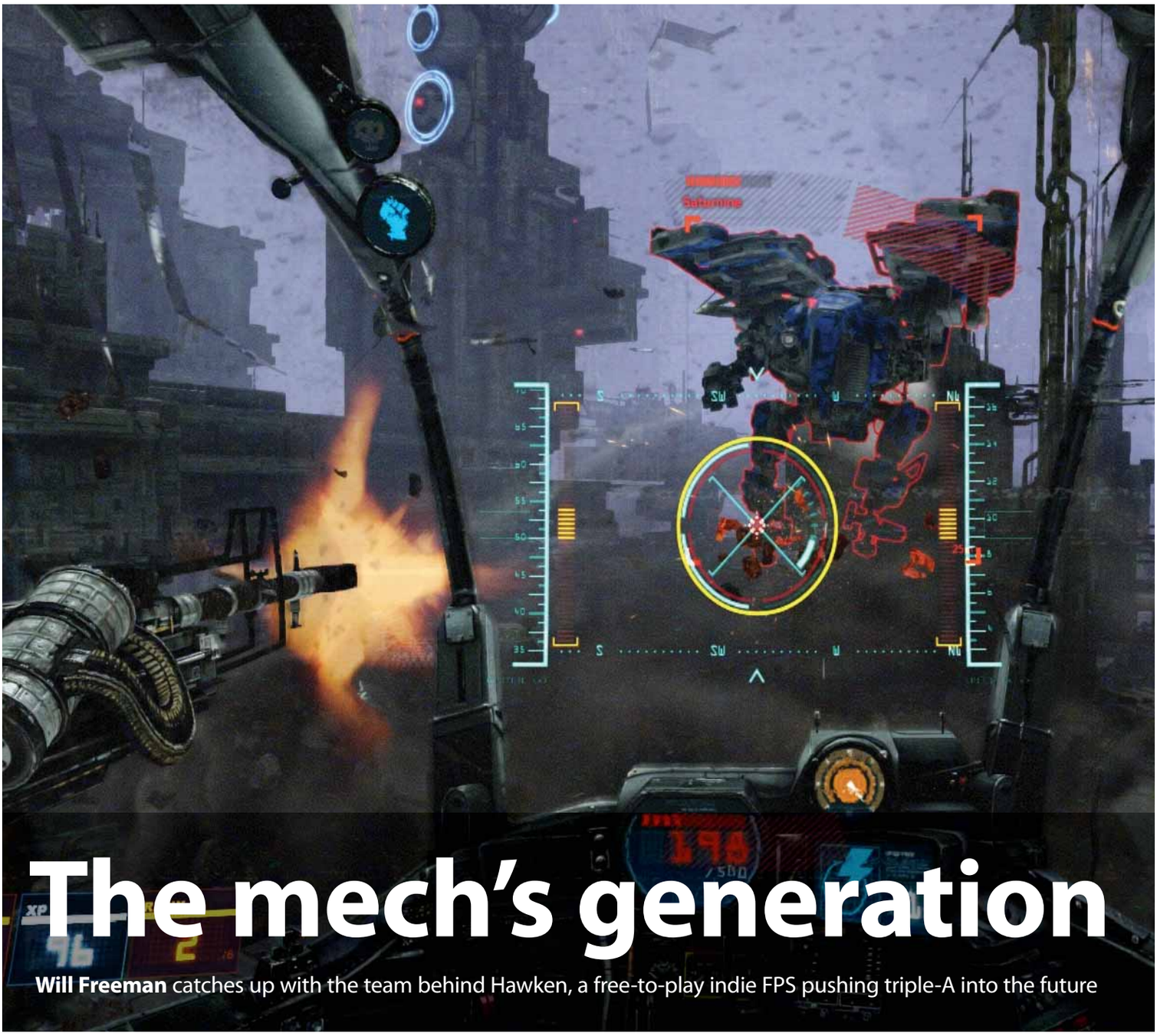

The mech's generation

Will Freeman catches up with the team behind Hawken, a free-to-play indie FPS pushing triple-A into the future

IN MARCH 2011, a game trailer appeared online with little initial fanfare. Its purpose was to debut *Hawken*, a release that, back then, only a handful knew anything about.

There was no expectation, and no clue from the name as to genre. The video starts with a disclaimer; one that makes clear that the game is a work in progress and, significantly, is the creation of a small indie development team.

Today 'small indie' has become an evocative term, and one that, put before a trailer, might suggest abstract gameplay, faux 8-bit pixel art, or esoteric narratives with poetic ambitions.

It was something of a surprise, then, that as the disclaimer faded away, it revealed a game that looked every bit the triple-A action blockbuster. The trailer is a thing of beauty for those attracted to dystopian worlds, offering a gliding point of view that sweeps over remarkably detailed and heavily industrialised landscapes. Smoke billows from vents, light and shadow dance over the terrain, and all in all, it hardly looks like typical indie output. In short, the trailer was a shock, and one that worked very well at jackhammering the game into the conscience of industry and consumers alike.

Hawken is a mech-based first-person shooter out very soon after this magazine, and the inaugural creation of Adhesive Games; until last year a relative unknown from Los Angeles, which at the time of writing employs a modest 21 staff. The game is built with the Unreal Development Kit, Epic's indie-focused development platform, and has thrust its studio into the glare of the mainstream games media spotlight.

"It had impressive visuals and a pretty unique style, and we created it with just a handful of people, so that created some buzz in the industry," says an understated Chris Lalli, Adhesive co-founder and the game's lead animator. "I think the public was happy to see a new mech game as well, since there wasn't much going on in the genre at the time of that first trailer."

FREE-TO-SLAY

As a result of the excitement generated by *Hawken*'s debut, publishers of every size, including some very big names, approached Adhesive looking to sign the game.

However, it was a publisher formed especially for the game named Meteor Entertainment that eventually secured a partnership to release *Hawken*, and quickly it was decided that the title would adopt both a free-to-play and transmedia model, which will see the game's universe expanded to a series of digital shorts and more. Another surprise then, as a game that appears to be very different from typical free-to-play fare adopts a model yet to make a significant impact in core triple-A gaming.

Part of the decision to go free-to play came from the game's session-based multiplayer structure; a system that demands the largest pool of potential connected players possible to succeed. And as mobile and social have proved, few can resist a base price tag of zero. Free, Adhesive hopes, means more players. ▶

Hawken (above) takes place on a dystopian planet which is on the brink of collapse. You take control of a high-powered mech in a fight for survival and online supremacy

THE UDK WAY

AS WELL AS impressing consumers and industry figures across the globe when its trailer debuted, *Hawken* has also served to demo the potential of UDK.

Epic's indie-focused version of the Unreal Engine has underpinned impressive titles before, but *Hawken* is presently the platform's poster child.

So what attracted the Adhesive Games team behind *Hawken* to the engine tech?

"UDK was a no-brainer when we were ready to start development on the game," confirms Adhesive Games co-founder and lead animator Chris Lalli. "It's a professional-level, triple-A quality game engine that's available to the public for free.

"We had no financial backing when we started working on *Hawken* so that was a big deal. Secondly, Unreal 3 is an engine that is heavily geared towards first person shooters, as well as networked play, so we were able to have a playable prototype of our game up and running very quickly."

The decision to pick UDK clearly paid off for Adhesive, which has been showered with attention as a result of *Hawken*'s technically muscular visuals.

Top-to-bottom: Chris Lalli of Adhesive Games and Mark Long of Meteor Entertainment

"Having no entry cost to the game greatly increases the size of the player base, so you can easily find matches with good ping and less waiting," states Lalli, who also cites the free-to-play model's capacity to enable post-release updates and player engagement; a tough discipline to master in the world of retail games, even with the dawn of downloadable content.

"You can listen to player feedback and frequently make changes that the community wants, in a way that's just not possible with retail games," says the animator. "The game becomes more of a service than just a product, so it can evolve organically. The mech genre is perfect for this model because there's so much tinkering and customisation available to the players, it allows us to continue creating content and variety for them long after the launch."

"Free-to-play lets triple-A developers build a player community and connect with their users in a way they couldn't before," adds Mark Long, Meteor CEO and former developer, author, graphic novelist and US Army Major. "They come from a time and place where releasing a game in a box was the end of everything.

"Until now maybe it's been easier to build that engagement with far smaller player communities, where they have broken down the barriers of ownership and made creator and consumer basically the same thing. I've seen that with small comic releases at many Comic-Cons. Free-to-play triple-A should let the same thing happen with huge global audiences, and I'm excited to see how that turns out."

PAYING THE PRICE OF FREE

Of course, free-to-play comes hand in hand with the contentious matter of 'pay-to-win', where free monetisation models upset the balance of a game by letting players improve their abilities and standing in leaderboards and such by investing real world cash. Perhaps more than anywhere else, in a multiplayer-focused combat game pay-to-win has the power to utterly derail its host title. Fortunately for prospective *Hawken* fans, Adhesive and Meteor are well aware of the pitfalls of pay-to-win.

"Pay-to-win is the new dirty word in gaming, and rightfully so," says Lalli. "We want to avoid that kind of design at all costs. So our model is inspired by free-to-play games that do things correctly, and that have supportive communities." Pointing to games like *Team Fortress 2* and *League of Legends* as bastions of well implemented free-to-play, Lalli confirms that in *Hawken*'s case, upgrades or customisations that effect gameplay can be earned without financial investment on a customer's behalf.

"We do have items that can only be obtained through real currency, but those are strictly visual or aesthetic flourishes," he explains. "Things like paint schemes or thruster effects that don't impact skill level or gameplay in any way. Non-paying players will still have access to a wide variety of visual components as well, so we think everyone will be happy."

And according to Long, Meteor and Adhesive are also devoted to making sure *Hawken*'s free-to-play structure does not err into the morally questionable territory that has convinced some to subscribe to that monetisation-targeted adage 'free is evil'.

"Some of the things you see developers and publishers doing with mobile and social free-to-play really pisses me off," insists Long, talking of the tactics used to encourage player spending through various mechanics of interaction.

"We want to be the vanguard of hardcore and core gaming, so we don't want to go anywhere near that kind of thing. We don't want it to become pay-to-win, and we will never exploit our players."

AN EASY PC DECISION

Before the decision to make *Hawken* a free-to-play title, it was in fact on course to be a standard downloadable game, with the likes of Xbox Live considered as potential distribution platforms.

"Our original goal for *Hawken* was to get it on as many platforms as we could, which was another reason that Epic's UDK was appealing, since it also supports consoles," says Lalli. "That's still a goal we have, but as time went on we knew we needed to narrow our scope and focus on PC development. The main reasons were resources and the decision to commit to free-to-play."

According to Lalli the current generation of consoles still imposes too many limitations and restrictions, both visually and with regard to updating and patching content.

"We need extreme flexibility in making changes to the game, integrating community feedback, and adding new content," says the studio founder. "On the PC we have complete control of that."

STICKING TOGETHER

AFTER HAWKEN'S announcement, Adhesive has enjoyed much attention, but the inner workings of the studio remain something of a mystery. Currently home to 21 staff, the outfit is apparently an advocate of a creative democracy, where each and every team member can put forward ideas.

"Adhesive is a very collaborative studio," offers its co-founder and lead animator Chris Lalli. "Everyone has input into the game and can influence decisions. We're still small enough that we can bounce ideas off each other. Sometimes you just turn to the person next to you with an idea and later that day it's in the game to be tested."

However, there is something of an auteur at Adhesive's reigns.

"Visually, the style of *Hawken* is very much the result of Khang Le, our creative director," explains Lalli. "He had a very clear idea of what he wanted the world to look like and made sure it translated almost perfectly to the game. So I would call Khang our visionary."

Lalli's experience seems to support the argument that, from an infrastructure point at least, consoles are not yet ready for the kind of unbridled proliferation of free seen in the mobile and console space.

ACROSS THE BOARD

And what about the none too small matter of *Hawken*'s transmedia ambitions, which include prose books, graphic novels, a feature film and anime, all of which are reportedly well underway? Even for a gaming giant, it would be an intimidating range of media through which to weave a story. And, for the time being at least, Adhesive is not a gaming powerhouse.

"In the beginning it was overwhelming," admits Lalli. "But we've managed it through partnerships with other groups that we've formed this kind of symbiotic relationship with. For example, Archaia is publishing the *Hawken* graphic novel, so they've done all the heavy lifting on that piece of media."

For Adhesive, it's come down to collaboration, getting a range of artists and writers on board and overseeing the production and distribution.

"This way Adhesive can still focus on the game and just offer guidance on the look and feel of the art and the lore involved in the *Hawken* universe," says Lalli. "We've been really excited about how it's coming along."

Adhesive, of course, have had Hope at their side, and his experience of transmedia and other art forms to call on. And, as a self-confessed evangelist of transmedia and its power to function as a marketing tool in its own right, Hope is more than happy to help out.

"The idea with the transmedia approach is that all those elements – the graphic novel, the feature film – become points of discovery," states the Meteor boss. "We made sure that through good transmedia design everything is connected, but works separately, in isolation. And the transmedia model supports free-to-play very well too. They are perfect for each other."

> ***"Our biggest challenge from the start was just creating the game we envisioned with such limited people and resources."***
>
> Chris Lalli, Adhesive Games

REAL STEEL

With an indie like Adhesive aiming to hit triple-A quality, succeed delivering free-to-play in a first-person shooter, and fleshing out a far reaching transmedia model, there were of course challenges in taking *Hawken* from that impressive trailer to finished project. It may be impressive that just 21 core staff have created *Hawken*, but it's not always been easy.

"Our biggest challenge from the start was just creating the game we envisioned with such a limited amount of people and resources," confirms Lalli. "These limitations affected a lot of our decisions and helped shape *Hawken*. We focused on multiplayer because it allows the players to create a fun experience through interactions with each other, rather than a resource-heavy single-player campaign that we didn't have the manpower for."

Lalli admits sci-fi made for an ideal theme because of its status as a genre that is more forgiving regarding repeating and reusing assets and textures.

"We would kitbash different models together and create totally new props and environments out unrelated things like weapons and robot parts," he concludes, musing on the affect this has had. "This has sort of become one of the unique and endearing qualities of *Hawken*'s aesthetic."

Just how popular *Hawken*'s gameplay will be with critics and consumers remains to be seen. And whether a free-to-play model like that seen in Adhesive's first game can keep a FPS with triple-A ambitions financially afloat is still a mystery. The following months will also reveal if the free-to-play and transmedia business models as they are today really are perfect bedfellows.

The challenge has only just begun for Adhesive. Now they have to prove their game is worth its salt, make some money and demonstrate the value of free-to-play in the FPS genre.

If the studio's skill with preparing teaser videos is a measure of its wider abilities, then it should have little to worry about. ■

www.adhesivegames.com

Battles are fought within the confines of industrial complexes that litter the world (above left). Eight original maps are promised with more to follow as DLC

30 UNDER 30

Happy Christmas.
Here's to bright futures.

The UK video games industry is filled with ambitious young talent who quickly establish themselves within the trade – but which stars are shining most brightly? Get in touch and we'll send you some!

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30 UNDER 30

Develop's annual talent spotlight has returned to shine a light on the young talent of today; those people on the frontlines of development who are shaping the games industry of tomorrow

Mary Casey
Production Director,
Mind Candy

Twenty-nine-year-old Casey joined Mind Candy in 2011 as a producer for new IP. During her time at Mind Candy she impressed her colleagues in overseeing production of the record-breaking, BAFTA-nominated *Moshling Zoo* game for Nintendo DS. She has since led a team working on a currently unannounced new IP. Casey previously worked in triple-A production at both Activistion and Disney, contributing to *Pure* and acclaimed racer *Blur*. Casey is seen by her team as an inspiration to those considering a production career.

Daniel Hall
Gameplay Engineer,
Rare

Hall, just 24, came to Rare from The Game Assembly, on a year-long, end-of-course internship. He arrived just as his new employer was entering the final leg of *Kinect Sports: Season Two*, and proved an immediate asset and a darling of Rare's designers. Praised for the ease with which he assumed responsibility with confidence in each area he was moved to, as Hall's internship ended, he took a contract position and then a full time role at Rare. Hall has received outstanding feedback from peers and is keen to learn about all aspects of game engineering.

Jamie Stowe
Level and Mission Design Director,
Ubisoft Singapore

Charged with overseeing all level design content on *Assassin's Creed III* at Ubisoft's Singapore studio, 28-year-old Stowe mentored and managed 15 designers while he served as level director, making a spectacular impact at his employer. His hands on approach saw him lead development of *Assassin's Creed III*'s Naval Battles gameplay and designed the accompanying E3 demo, earing a great deal of respect with his team. Praised by his team mates for both his technical and managerial skills, Ubisoft Singapore is sure Hall has great things ahead of him.

Katie Goode
Technical Designer,
SCE London Studio

In only a few short months, Goode has, say her co-workers, become the go-to staffer for solutions to difficult design problems. And they say that's no surprise. Goode has established a great reputation for inventiveness, creativity and an often unrivalled technical and creative ability, insist those behind her nomination, who also highlight her knack for finding inexpensive solutions to expensive problems. An avid gaming collector with a background in physics, 25-year-old Goode is famed for getting the job done no matter what the challenge.

Conor Crowley,
Project Manager,
Jagex

Crowley joined Jagex in 2010 from Realtime Worlds, where he'd worked on *APB*. Since joining Jagex, he has moved up the ranks from QA manager and associate producer through to project manager with impressive speed. Crowley's ability to handle multiple projects never ceases to impress his team, and from working on deployment build processes, through to troubleshooting and fixing live issues, and mentoring the graphics team, QA testers and game developers alike, he has a wealth of skills that have, his team says, made the 28-year-old a 'Jagex legend'.

Benjamin Hill
Creative Director and Co-founder,
Whitepaper Games

Within just a year, 26-year-old Hill has achieved substantial status in the games industry as a promising game designer and as an academic game design lecturer. Co-founding White Paper Games in September 2011, Hill has worked together with his business partner Pete Bottomley and core team of five to get their debut title *Ether One* off the ground, whilst growing their business and making their name known. Already familiar with a speaker role at conferences, Hill is praised as a focused manager and devotee to forwarding games education.

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Matt Allan
Lead Artist, Bossa Studios

Coming from a background in illustration, animation and digital design, 27-year-old Allan joined Bossa Studios in 2010 during the early stages of production on its BAFTA-winning title *Monstermind*. Allan rapidly rose to the position of lead artist through his combination of strong art skills and an aptitude for style development. His strength lies in his ability to enthuse his team to create high quality work on time.

Jack Lang
Programmer, Futurlab

Beginning his programming career at 18 in 2007, Lang attained a senior level of Flash expertise after just four years. Working on Futurlab's *Velocity* as a junior programmer and technical designer, with no prior experience in C, Lang studied his employer's code base and tools with astounding results. He has now taken programming duties on Futurlab's next PlayStation Mobile game, having developed a reputation for technical competence.

Terence Burns
Lead Platforms Programmer, Pitbull Studio

Born in 1985, Burns only joined the games industry in 2009, and has already made remarkable progress. His career began with work on Reflections' *Wheelman*. Joining Pitbull Studio at the dawn of 2011, Burns quickly showed his new employer his programming abilities, quickly earning promotion to lead platforms programmer, working on the forthcoming Unreal Engine 4, collaborating closely with Epic Games.

George Eade
Flash and Unity Developer, 4T2

Described by those behind his 30 Under 30 nomination as 'a marvel of gaming goodness', at just 23, Eades is a trained mathematician who has already created a number of games at 4T2, quickly producing amazing results with addictive gameplay, and securing his employers highest player return rate in over ten years with client project CBBC's *Sarah Jane Adventures: Academy*. Eade's games have to date received over 30 million game plays.

Joe Dale
Digital Product Manager, nDreams,

At 26, Dale serves as nDreams' digital product manager, meaning he deftly juggles marketing, PR, data analysis and online community roles. Hi multi-disciplinary skill set constantly impresses his employer, and his fellow staffers praise his tireless work serving a global community of over a million users. He keeps them happy, answers their questions quickly, and has forged a reputation as a talented community man.

Paul Glover
Programmer, Ubisoft Reflections

Now 27, Glover worked as a mission scripter on Ubisoft Reflections' *Driver: San Francisco*; a game critically acclaimed for its interweaving of narrative and gameplay structure. His time at Reflections has given Glover and opportunity to demonstrate an impressive set of programming skills across two internal projects, and now his is a rising star working on *Watch Dogs*, Ubi's latest next generation IP, which turned heads back at E3 this year.

Luke Dicken
AI Researcher, University of Strathclyde, and Games Developer, Robot Overlord

With 12 years of AI experience, 28-year-old Dicken is as a PhD researcher in artificial intelligence for games. He has achieved significant regard in that field, which has taken him to numerous conference stages. At the same time he writes prolifically about games and heads up his own indie studio Robot Overlord Games. He also does work-for-hire AI development, co-leads the Scottish chapter of the IGDA and co-organises AltDevConf.

Sophia Coney
Director of Publishing, Lockwood Publishing

While Coney's title may suggest a role from outside of development, she is greatly involved in her employer's games. Joining Lockwood as an environment artist in 2008, the 29-year-old is now director of publishing, heading up the senior management team while keeping a hands-on role in the creative process. Coney's colleagues praise her skills and devotion to encouraging more women to consider a career in games (*see page 34*).

Bill Rountree
Co-founder, Too Easy Games

At just 22-years-old, Abertay graduate Rountree has founded his own studio, Too Easy Games, and already attracted work crafting a game for the 2014 Glasgow Commonwealth Games. In a few short months since graduating, he hired staff, developed a full title, *Trap Mansion*, and released it to the public. Praised by his nominators for his work ethic and skill level, Rountree is reportedly living proof 'nice guys can be success stories'.

Mark Backler
Designer, Independent

Former Lionhead designer Backler has conscientiously impressed his colleagues on *Fable II*, *Fable: The Journey* and *Milo & Kate*. Those who put him forward for the 30 Under 30 assert that he is talented, tremendously hard-working and extremely modest. Now an independent working on his own project, Backler also recently emerged victorious after assuming a journalistic role at the inaugural JournoDevSwap (*see Develop #133*).

Gareth Richards
Senior VFX Artist, Playground Games

Before joining Playground, 28-year-old Richards worked at Bizarre Creations on *Blur* and *James Bond 007: Bloodstone*. After Bizarre, he moved to Eurocom to work on the *GoldenEye 007* reimaging before joining Playground, building an impressive portfolio with impressive speed. As the sole visual effects artist on *Forza Horizon*, Richards has been a lynchpin of Playground's art team, much regarded by his peers.

Andrew Roper
Co-founder, IndieSkies

Still at university, 23-year-old Roper has already helped form start-up, IndieSkies, releasing a number of games, such as *COR3* and *Kaleidobooth*. He is, while finishing his final year, working on two more, and is spoken of very highly by those that have worked with him. A talented tools coder with a flair for experimentation, he is already, despite his brief time in the industry, a well-known member of the UK development sector.

Nat Al-Tahhan
Director, Opposable Games

27-year-old Opposable co-founder Al-Tahhan defines the visual quality and feel of her studio's output, and was instrumental in creating the world and characters for their first release, *Clockwork Racers*. She has a history in print and product design, and is a regular on the games jam circuit. Her 'blisteringly quick' output has also led to her providing live drawing for meetings and conferences with clients including TED and the Wellcome Trust.

Mark Jawdoszak
MD and Lead Developer, Gaslight Games

First trying development in the late 1980s on a BBC Micro computer, Jawdoszak finally left a career in IT some 20 years later, establishing Gaslight Games in 2008. Originally a mod team, under Jawdoszak's leadership Gaslight is emerging as a respected indie. 28 years old, Jawdoszak remains lead developer of the outfit, and is fiercely devoted to helping students to find and secure the opportunities in the industry.

Seth Sivak
CEO, Proletariat

At just 28, Sivak already has a career as a lead designer at Zynga Boston behind him, and is now CEO of a new indie studio named Proletariat. Highly regarded as a games designer even as a student, Sivak is also a GDC speaker, award-nominated games designer, and level design tutor at Northeastern University. An advocate of knowledge sharing across the industry, he's also a popular voice in the games development scene.

John Murphy
Game Designer and Co-founder, Young Horses

Having abandoned plans to become a conservation biologist, 28-year-old Murphy was an IGDA scholar by 2010. After graduating, he formed the indie studio Young Horses, and now works as an on-staff game designer at a middle school called ChicagoQuest, which uses game-like learning and systems thinking to get kids engaged in modern skills. Murphy is a shining example how conventional industry roles are dramatically changing.

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Dan Hinkles
CEO, Serious Parody

When Hinkles joined outfit Nobles Casinos he inspired a change in the company's primary direction from gambling to software and video games development. He designed the team's first game, *Wrestling Manager* on iOS, and helped raise the funds needed. During all this, Dan completely rebranded the company becoming the co-founder of Serious Parody. Not bad for a 27-year-old.

Dan Kenny
Game Director, Eyesodic

Developing games isn't enough for Dan. He's also taken it upon himself to champion and promote the Irish games sector. Dan both founded indie Eyesodic games, and runs IrishGameDev Rises, an initiative to highlight the talent and skills of those who may not be able to afford a college education. This has allowed people all over Ireland to have a voice and showcase their skills as games developers.

Martin Darby
Chief Creative Officer, Remode

Derby, 27, has always been the driving force behind UK indie Remode. He originally founded the studio in 2007, and has been integral to its growth to over 18 people, and the creation of more than 30 online and mobile games. He is responsible for the creative vision and delivery of all projects, including client work and recently the studio's own IP, which is currently in development.

Neil Sproston
Senior Game Designer, Evolution Studios

Sproston has worked at Evolution for over two years and has progressed rapidly to becoming a real driving force behind the people he works with. When he first joined Evolution he started as an AI rigger but showed great potential from the very start and always had great ideas. The 27-year-old is diligent, hard-working, creative and very passionate about the games he works on, say his co-workers.

Adam Stone
Game Level Designer, Lionhead

Stone's colleagues say there is no one at Lionhead Studios who works harder, longer or with more unrelenting enthusiasm than the 25-year-old. Those behind his nomination insist Stone isn't afraid to speak his mind whenever he sees a way to make the game better, and say this level designer's positivity, talent and love for his work are a true inspiration for others in the Lionhead team.

Omer Younas
2D UI Artist, Crytek UK

Joining Crytek UK to work on *Crysis 2* multiplayer, Younas has grown to become a key member of the *Crysis* team. Over the last year he's helped build a dedicated 2D team at the studio, and Younas' love for UI and graphic design have made him a popular and highly regarded team member. And he's not afraid to admit he sees himself in a top role in the coming years.

Romana Ramzan
Player Champion, Denki

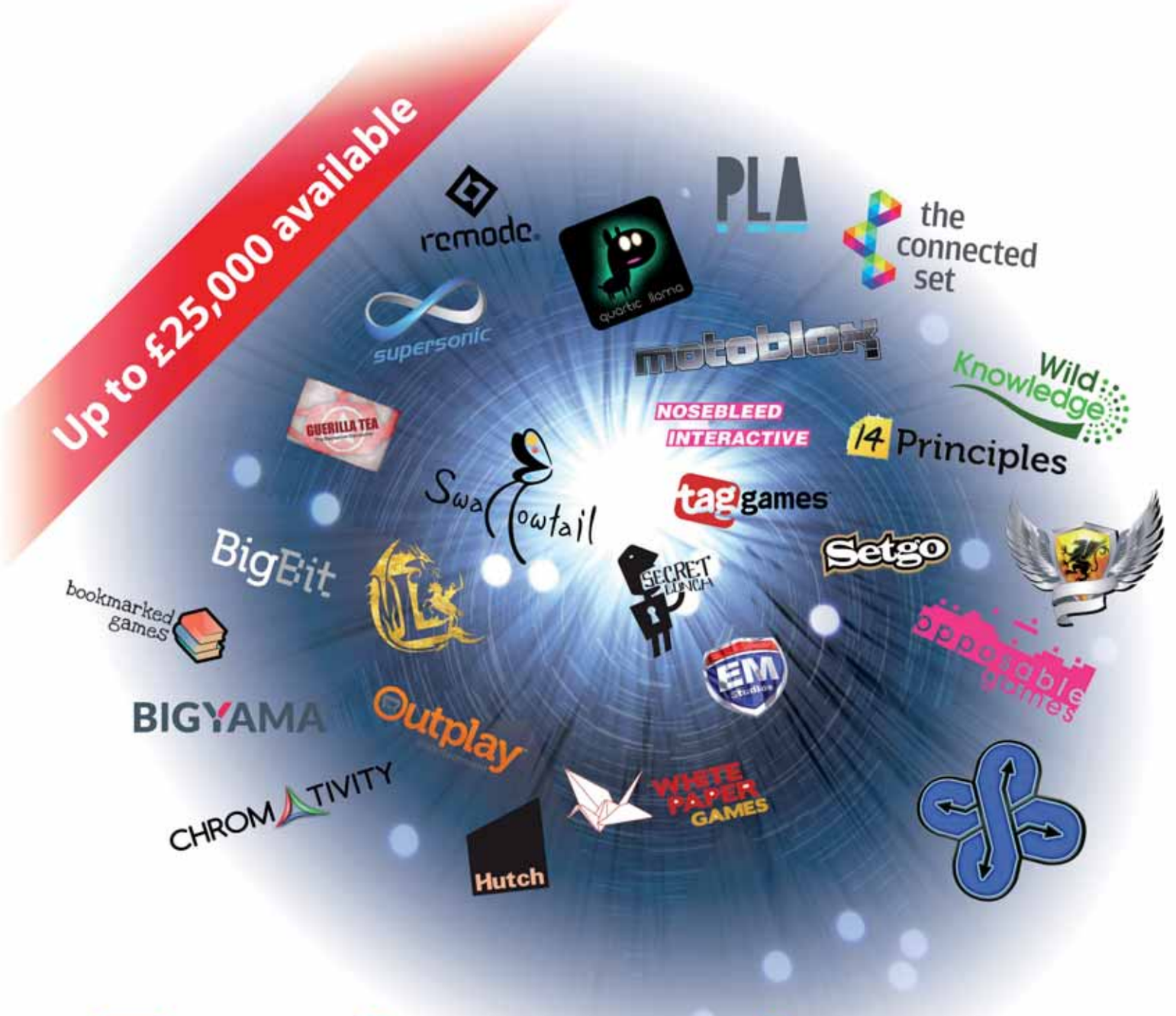
Responsible for customer development, 29-year-old Ramzan's background in usability and UX has allowed her to craft a unique role at Denki. Starting out as a GDC volunteer, she also organises the Scottish Game Jam, and has even helped the British Council set-up a game jam in Thailand. She is also authoring a PhD paper on games potential for health; a subject on which she talk about at various conferences.

Tom Knights
Lead Writer, One Thumb Mobile

Tom is the lead writer for the iOS MMO *Celtic Heroes* for One Thumb Mobile, and it is due to his creative skills that the story of the game is brought to life. Alongside crafting the overall story of the game, Tom is also responsible for all of the quest and NPC dialogue. He has also works with Creative Scotland and Playwright's Studio Scotland in educating other professionals on writing for video games.

30 UNDER 30 HONOURABLE MENTIONS

This year's 30 Under 30 saw the most nominations *Develop* has ever received, meaning a record number of no less worthy youngsters didn't get a spot in the final 30. Some of those were: **Sebastien Long**, Player Research; **John Chalkley**, Jagex; **Andrew Eastman**, Jagex; **Leigh Swift**, Pitbull Studio; **Jan Willem Nijman**, Vlambeer; **Rami Ismael**, Vlambeer; **Nicolas Godement-Berline**, Majaka; **Gordon Russell**, Ingot Games; **Dave Taylor**, Too Easy Games; **Fredrik Henriksson**, Alientrap Games; **Andrew Porritt**, GoGo-Robot; **David Hanson**, Pixel Beamv; **Alex Wozniak**, One Thumb Mobile; **Paul Simon**, One Thumb Mobile; **Lauren McKellan**, One Thumb Mobile; **Elaine Willdridge**, One Thumb Mobile; **Max Morrice**, One Thumb Mobile; **Viktor Sághy**, One Thumb Mobile; **Tom Knights**, One Thumb Mobile; **Calum Minuti-Goold**, 8dio Productions; **Carl Button**, Thumbstar; **Jakub Pudelek**, Plumbee; **Gordon McLean**, Beartrap Games; **Alex Zeitler**, Guerilla Tea; **Shironne Peiris**, Ubisoft Reflections; **Jamie Smith**, Ubisoft Reflections; **Kevin Williams**, Ubisoft Reflections; **Michael Mackie**, Ubisoft Reflections; **Stuart Scott**, Ubisoft Reflections; **Tim Kirk**, Ubisoft Reflections; **Richard Alle**, Ubisoft Reflections; **Richard Carrillo**, Ubisoft Toronto; **Mazen Sukkar**, Freelance Game Designer; **Navid Khavari**, Ubisoft Toronto; **Laurent Malville**, Ubisoft Toronto; **Ben Brooks**, Lionhead



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Highland games

Politically, ethically and creatively, Scotland is seen as a progressive nation. But is its games development sector thriving at time when Britain is in the grip of economic turmoil? **Will Freeman** asks the region's experts

Top-to-bottom: Richard Scott, Colin Urquhart and Leslie Benzies

IF YOU'RE IN doubt as to Scotland's impact on the global games industry, consider this. *Grand Theft Auto V* is currently in production in the nation's capital city of Edinburgh.

Quite simply, perhaps the most culturally important video game series of all time is a product of Scotland.

And yet triple-A is but one facet of the country's rich variety of developers and games-related organisations. Indie games education and social also thrive in the UK's northerly most region, making an impact felt the world over.

"In common with the rest of the UK development sector, Scotland is world renowned for excellence in design and creativity," offers Andy Semple, Rockstar North's studio director. "The Scottish sector benefits from the close relationship between the companies that operate in the development space and a strong program of games courses in higher education. There is a great willingness from those already in the business to foster and support new talent coming through."

Positive stuff indeed from one of the world's most respected games studios, but Semple isn't alone in his optimistic outlook. So much so, in fact, that it's hard to find more than a whisper of negativity when talking to those from inside the Scottish games sector.

"Scotland's development scene is thriving, absolutely," offers Professor Louis Natanson, Aacademic director of the Institute for Arts, Media and Computer Games at renowned Dundee establishment the University of Abertay (*see page 32*), in support of Semple's statement. "Realtime Worlds' collapse sparked off a huge number of new start-ups focusing on different areas of the industry, which produces a healthy mix of different revenue models and approaches. It all helps make the Scottish scene much more diverse and much more resilient."

> ***"Dare to be Digital and Abertay University's Prototype Fund typify the sector's focus on innovation and creativity, as well as a 'can do' attitude."***
>
> Andy Semple, Rockstar North

THE SPICE OF LIFE

Spend time talking to Scotland's devs, and you'll hear repeated talk of local diversity. It's a point of pride for those making games in the region, and a sentiment firmly rooted in reality. And to many based there, the country's industry reflects the global games business in microcosm.

"Rockstar as a triple-A studio is a pillar of the Scottish games industry. However that does not really typify the studio model in Scotland today," insists Romana Ramzan, 'player champion' at Dundee's digital toy boutique Denki. "There is now a strong emphasis on small indie and innovative microstudios. If you consider the likes of ourselves, Cobra Mobile, Digital Goldfish and Tag Games you can see the basis of a strong, vibrant indie scene, and there are new innovative teams adding to that all the time."

"It is testament to the forward-thinking nature of many Scottish games companies that we have had a very strong mobile development scene up here for many years," adds Paul Farley, CEO and founder of mobile studio and self-publisher Tag Games. "The beauty of the industry up here is however found in our diversity. It is genuinely difficult to define it or pigeonhole it on such terms."

The reasons for Scotland's multiplicity of studio models are manifold, and the contribution of both Rockstar and Abertay to the area certainly does much for the nation's appeal to developers further afield, many of whom have made a home in games hub cities like Dundee and Edinburgh. But there is something else at work.

Sadly, it is in part due to the high-profile collapse of *APB* studio Realtime Worlds. That was two years ago, and Scottish devs have moved on, and as Farley points out – aping Natanson's feeling – the closure has now had a positive impact.

"The impact of Realtime Worlds can still be felt in areas such as recruitment," he says. "However, one silver lining from that particular cloud has been the number of start-up studios that it has either directly or indirectly spawned."

The post-Realtime Worlds recovery started very quickly across the area, and a conscious and collective effort to support former staff from the studio began, meaning that in many ways, the company behind *APB* lives on, in spirit and through numerous local studios for from its remains.

> ***"Rockstar as a triple-A studio is a pillar of the Scottish games industry. However that does not really typify the studio model in Scotland today."***
>
> Romana Ramzan, Denki

"I think, rather than ploughing on regardless, we've collectively reinvented ourselves," suggests Phil Wilson, project director and studio manager of eeGeo, a Dundee start-up wholly dedicated to creating a stylised 3D replica model of the real world and providing it as a flexible platform for apps and games.

"And I still see triple-A right across the local scene," he adds. "Sometimes in the most unlikely places and on budgets that some wouldn't get out of bed for – the rate of change in the market is accelerating, but I think we're doing better than just keeping up."

SMALL IS BEAUTIFUL

That shift from triple-A to other models globally has left Rockstar North and Ruffian as the bastions of traditional console gaming in Scotland, and fostered a spirit of nimbleness that the nation's developers seem particularly comfortable with.

"As the changes in the industry swept across the UK some console developers didn't fair too well, but they have spawned smaller more agile microstudios handing more control to the people who make the games, and giving them the chance to connect more directly with their customers which is very exciting," explains Richard Scott, executive producer and MD at influential animation house Axis.

The result is a high number of small and medium sized studios that are better equipped than larger outfits to adapt, and in the current climate, being flexible is a matter of survival for many young companies.

"This kind of flexibility allows us and smaller developers to see a gap in the market and simply go for it," states Mike Dailly, head of development at tool outfit, developer and publisher Yo-Yo Games. "Scotland certainly has the talent to do this, and it has some great universities for up-and-coming developers, along with some very experienced developers already in the local industry."

And, says Axis' Scott, in spite of such clear local pride, Scotland's studios have developed a globally-facing viewpoint that benefits all concerned.

"I think all people involved in games in Scotland have a very international focus." He says. "The entrepreneurial spirit means there is no fear of boundaries. This is very exciting and isn't as prevalent in other creative industries in Scotland."

COMMUNITY MATTERS

While Scotland's games making prowess isn't always recognised (*see panel 'Moving on'*), today it truly is one of the world's leading players, and that is in part, many say, down to a sense of the value of community. Even giants like Rockstar North make sure to support initiatives like Abertay's Dare to be Digital development contest for young games makers, for example.

"It's very interconnected, with companies trying to maximise their creativity rather than building massive corporations," proposes Abertay's Natanson. "There's a quite incredible collective community where everyone knows everyone else, which in Dundee, often centres around Abertay University."

By now you'll have noticed Abertay's prominence in Scotland's development community, and it's not due to posturing on the establishment's behalf.

"Dare to be Digital and Abertay University's Prototype Fund typify the sector's focus on innovation and creativity, as well as a 'can do' attitude of getting on with the business side of making video games," says Rockstar North's Semple. "It is initiatives like these which will hopefully ensure graduates feel their futures lie in Scotland, or at least the UK, rather than in studios abroad, and in turn will attract talent to join the development community in Scotland."

Prototype Fund has backed studios such as PLA Studios, Lucky Frame, Guerilla Tea and others. What that means on the ground is that, as Colin Urquhart, CEO of Glasgow-based facial animation specialist Dimensional Imaging, explains, there's enough locally trained talent to make a recruiters job relatively easy.

"Dimensional Imaging is currently recruiting and there certainly appears to be good a source of fresh talent coming out of both the more traditional science and engineering courses and the newer games related courses from the likes of Abertay and UWS," he says.

SCOTTISH INDEPENDENCE

Globally, indie development thrives, but in Scotland in particular, the independent and small studio scene bristles with energy. Here, some of its stars offer insight into what it's like for indies based in the country

"Right now, the biggest strength I can see is the diversity in games being made. Although, most of the companies are focused on similar platforms, the different genres and styles of games being made is fantastic."

David Thomson
Founder, Ludometrics

"The link between the universities – Abertay Dundee, Glasgow Caley and Edinburgh Napier – and the local games scene are one of the biggest strengths in Scotland. Having this ready-made talent pool makes it easy to recruit."

Kate Ho
Manging Director, Tigerface Games

"Microstudios is definitely a common theme [here], but I think one of the core things that many have in common beyond that is being 'cute and quirky'. Denki are a great example of this, making a cute word-based game."

Luke Dicken
Director, IGDA Scotland and Founder
Robot Overlord Games

"We've been making world-famous games here since DMA Design released things like *Blood Money* and *Lemmings*, decades ago. Large numbers of the staff who worked on these titles, went on to make *Grand Theft Auto* an so on, and are still actively involved in various roles."

Stewart Waterson
Director, Tiger Games

"Scotland's games industry is as varied as the people who live here but its easy to see how the industry has changed over the last five-to-six years. The mobile games market is going from strength to strength."

Gordon Russell
Director, Ingot Games

"A strong community spirit exists between the developers. That can be shown by the strong and consistent reaction the recent Creative Scotland report garnered from all and how, as one Scottish voice, we made it an international story."

Peter van der Watt
Founder, Blazing Griffin

In association with:
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Top-to-bottom: Mike Dailly of YoYo Games, Professor Louis Natanson of Abertay University, Romana Ramzan of Denki and Paul Farley of Tag Games
Main: Denki's Save the Day

GOING SOLO?

Along with educators, government and trade bodies have an important role to play. And if you follow UK news, in recent weeks you'll have no doubt noticed Scotland's possible move to administrative independence, ending a 305-year political union with England and Wales. But if Scotland does break free from its southern neighbours, what might it mean for games developers?

"It seems that the Scottish government is more willing to support the games industry than Westminster, and generally views it in a more positive light," explains Rockstar North's president Leslie Benzies. "If Scotland does become independent hopefully the government will increase this support to help Scotland's position as a 'development bastion' and national success story. I don't feel this would be any kind of gamble; if the Scottish industry receives this support it will continue to go from strength to strength. If this were to happen, hopefully it would encourage Westminster to be prouder and more supportive of the UK games industry."

Outside of national level government, Scotland's developers generally agree that they are well supported by trade bodies, and even go as far as saying they must not rely on them too heavily.

"As a heavily R&D driven and export lead business, we enjoy very good support from Scottish Enterprise and Scottish Development International respectively," states Dimensional Imaging's Urquhart. "Fundamentally, though the support of trade bodies and government should only be expected to play a relatively minor role in developing a business. The main drive for success must come from the business itself."

Indeed, there are a wide range of existing initiatives and support available for Scottish developers, as Linda McPherson, creative industries director at Scottish Enterprise explains: "This includes regional selective assistance, a grant for job creation, used, for example recently by Serious Parody, eeGeo and Reloaded; equity investment, which has helped FanDuel and Outplay; and R&D support, which includes Rockstar North, who were awarded a £1 million grant from Scottish Enterprise, representing a 15 per cent contribution to an £8 million project."

> ***"If you're of the mind-set that 'we're only going to develop our game this way', it's easy to get left behind if the wind changes."***
>
> Leslie Benzies, Rockstar North

BEING REALISTIC

So, is Scotland's games development industry thriving? The answer seems obvious.

"I believe it's thriving," offers Tag Games' Farley, before looking to the future. "We have never had so many games companies. However, because of their age and size many still sit under the radar. Over the coming few years I fully expect we will have the commercial and critical acclaim to back up this underlying health."

In summary, Rockstar North's Benzies argues that while there isn't a specific model or method that typifies Scotland's dev scene, there is something that unites the way games are made in the country.

"A lot of the start-ups and developers we see know how important it is to be flexible when entering an industry that is evolving and broadening every day. If you're of the mind-set that 'we're only going to develop our game this way', it's easy to get left behind if the wind changes.

"You have to have a firm idea of what your game, or your studio, is going to be, but be willing to adapt too. So I suppose that's the Scottish way: passionate pragmatism." ■

MOVING ON

Journalist and consultant Brian Baglow looks at how government is responding to a report that hit headlines in September for seemingly dismissing the value of Scotland's games devs

EARLIER THIS YEAR, research commissioned by Creative Scotland and Scottish Enterprise, reported that the games industry in Scotland employed less than 200 people and contributed zero the country's economy.

This was a surprise to the 150-plus games studios, related companies, four universities and hundreds of students studying games-related degrees. Worse yet, the report was creative industries-wide, and the games sector was listed as having less economic benefit than the leather bookmark craftspeople.

I objected. I wrote an article which went global and got many concerned phone calls from the government organisations concerned and companies across the country.

Fast-forward four weeks and the government themselves asked for a meeting to explore what went so wrong. The short answer is that the report was based on the Standard Industry Classification (SIC) codes, which HMRC use to categorise businesses. It turns out that the creative industries, and games-related companies in particular, haven't had specific codes for the type of work they do. This has changed, but many games companies still don't classify themselves as such.

There are, apparently, many reasons for this. From 'tax purposes' to not wanting to get pigeonholed as a humble games developer. What it means, however, is that an organisation carrying out research and not knowing this, would create an inaccurate report.

The solution is now in progress. The government's own statisticians will use the Scottish Games Network's Company Directory – which makes it officially comprehensive – to identify all of the companies, universities and organisations in the country and will then base a new economic impact survey using that data. We should hear the results by the start of 2013.

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IN FOCUS: University of Abertay

In the city of Dundee sits one of the crown jewels of Scotland's games development scene. **Will Freeman** pays a visit to the influential establishment that's educating the next generation of games creators and much more

Abertay has an average of one lecturer for every 17 students today. It has been educating Scotland's workforce since 1888

THE UNIVERSITY OF Abertay in Dundee isn't just Scotland's most famous establishment for games education. It was also the home of the world's first video games tech degree, created back in 1997. It's known across the UK – and globally – as a bastion of games development learning, a champion of small studios and a funding body behind numerous success stories.

As well as teaching the art of games making at both post and undergraduate levels, Abertay helps young teams and students gain valuable experience with its Dare to be Digital games development competition, provides grants for developing new titles, and offers a wealth of business support and facilities.

"As the UK Centre for Excellence in Computer Games Education we see our role as developing the UK's talent base in a way that brings employability for graduates – from any university – and business sustainability for companies," explains Paul Durrant, Abertay's director of business development. "NESTA's Next Gen report and the Government response to it contained a recommendation that we disseminated our best practice and we have been continuing to do that."

But why the support for those outside Scotland? Most universities boast far reaching ambitions, but few serving the next generation of developers go as far as Abertay.

"The UK games industry is too small to be categorised by regional centres alone and we all know that the whole is greater than the sum of the parts," offers Durrant. "Whilst there are proximity benefits for Scottish companies in terms of working with us we also think we are contributing significantly to, say, the growth of Brighton as a location of games development companies through the number of developers there that we have invested in through the Prototype Fund."

> ***"We see our role as developing the UK's talent in a way that brings employability for graduates and sustainability for companies."***
>
> Paul Durrant, Abertay

FUNDING THE FUTURE

The Prototype Fund might just be Abertay's most famous element to those in games. It supports new studios launching and crafting their own titles, and offers up to £25,000 as a grant, and can also provide studio space, hardware and software.

The Prototype Fund has had a huge impact on us," explains Malath Abbas, co-founder and artist at indie Quartic Llama, which received backing. "It has allowed us to overcome personal circumstance and turn down job offers to pursue our passion for games development. The added benefits of the studio space, software and equipment that has been provided has helped us to remain independent and better deal with the necessary pressure and stress of starting a company from scratch and making games at the same time."

To date 58 studios have benefitted from Protoplay support, demonstrating the initiative's reach and ambition.

WHO DARES WINS

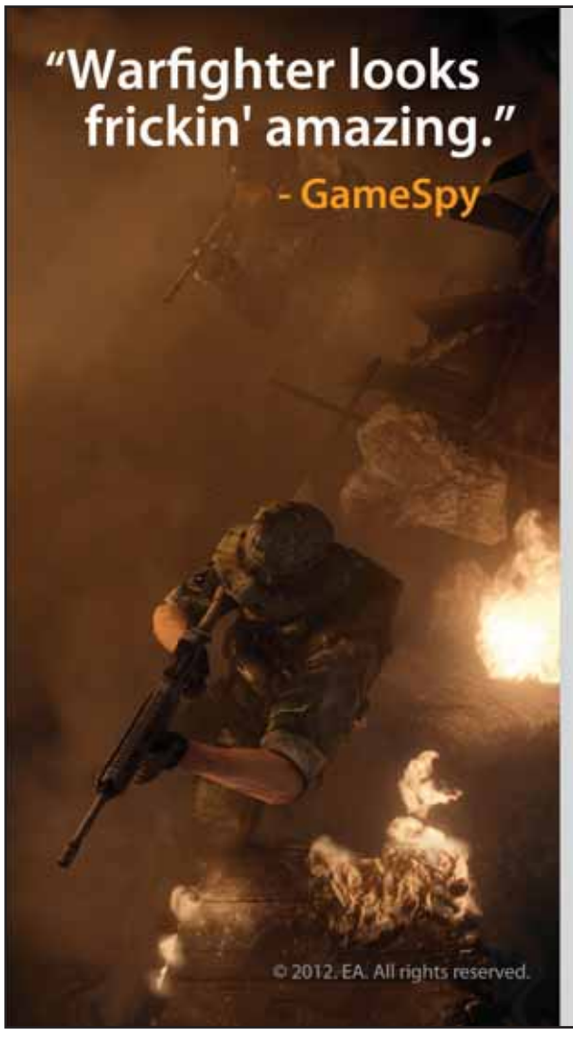
Aside from the Prototype fund, Abertay's Dare to be Digital development competition offers students and young teams from across the globe a chance to gain a hot-house training experience of running a games company under the deadline pressures and the watch of industry mentors, and ultimately offers its winners a nomination for a video games BAFTA award.

"Dare to be Digital is the reason we got together as a team," reveals Sophia George, co-founder of Swallowtail Games. "If it wasn't for the success we had in the competition, as well as the BAFTA Ones to Watch Award, we wouldn't be here as a studio today."

The prototype Swallowtail made for Dare to be Digital, *Tick Tock Toys*, is today in full production with the team now operating as an independent company (*more on page 55*).

"The experience of Dare was very helpful," continues George. "We had industry mentoring from top studios including Rockstar North and Crytek, who all gave great advice, some very honest feedback and helped shape our game into something we're all proud of."

In short, Abertay can offer prospective games developers a complete pipeline into the industry, starting with an undergraduate degree, followed by the Dare to be Digital contest to establish experience, the potential of postgraduate courses to further expand knowledge and the Prototype Fund to set up a studio as a bona fide business. ■



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Smashing the glass ceiling

As the ratio of women-to-men playing games continues to hail the industry from reaching maturity, why are there still less women making games than men? Lockwood's director of publishing **Sophia Coney** delves in

Main: Metaphorical 'glass ceilings' still block women and hamstring the games industry from achieving social equality

THE THEME OF 'women in gaming' has been a big topic in the video games industry almost since the start of the sector itself, although the nature of this discussion has changed significantly over the years.

For a time, the games industry was construed as 'male dominated', because the majority of players were men. This perception has changed greatly and now, statistically, women make up 42 per cent of players. Additionally, the PR and marketing sides of the industry have been inundated by women so that now male and female percentages are arguably equivalent – or very close to – in this aspect of the games production pipeline.

TOO LITTLE. NOT TOO LATE

However, this relative equality in numbers is scarcely reflected by the mere 15 per cent of women who are employed in the design and development side of gaming. And the women who do work in development are often pigeonholed into creating fluffy, effeminate content that appeals to the 'female' audience. This is a stereotype that many feel needs to be overcome by the industry as a whole and for which the industry itself is clamoring. Developer Lockwood Publishing is one such company determined to re-address the issue of 'women in gaming' as it pertains to the industry now.

With female developers and designers making up 20 per cent of Lockwood's team, the company has begun delving into why the number of women entering the industry on the development side is so low compared to that of men.

Gaming is still seen as a very male pastime, though this has improved in recent years it takes time for those generations of girls to grow up wanting to make games. A lot of young women now in their 20s have had the benefit of growing up through a golden age of consoles and that's why there is a slight increase in women interested in working in the industry at the moment.

I personally have always been around games. I have owned pretty much every console since the Commodore 64 and enjoy most game genres. This familiarity with games and my interest in art was the perfect mix to get me interested. Games, however, was not my first career path, when I left collage to do a degree there was no information available about how I could get in to the games industry.

I did a Fine Art degree and wanted to be a teacher. During my year out after my degree, I played a lot of *Eve Online* and made my own Flash games while working at a call center and it was during that year I discovered the Game Art degree at De Montfort University. I worked hard to fund myself through a second

Above: Lockwood's futuristic MMO for PlayStation Home, Sodium One

degree, but found that a lot of the skills I already had were easily transferable. I started an internship at the end of my second year and have worked in industry since.

POSITIVE EDUCATION

As a woman who loves working in the games industry, I believe that there is a lack of positive education about women in the gaming industry when it comes to career counselling for the younger generations.

While there are female games developers who would be seen as role models for this younger generation, it is often difficult to gain access to them to ask questions or for advice when exploring this career option.

Here at Lockwood we are actively involved with our local schools, colleges and universities where we give talks, offer internships and work with course leaders on their curriculum. I'd like to see more of this sort of action taken right across the games industry and the women of our trade pulling together to offer support and advice to young people.

LEARNING ABOUT LEARNING

That said the routes in to industry are not the same for everyone. I think it's important that a job combines things you love and the things you're good at and people should have this in mind when choosing a career path. At the moment I'd say the best route in to the industry is for students to get a good degree in their chosen field and produce a strong portfolio or example work – which could be anything from a demo reel to a simple Flash game.

But choosing the right course can be difficult, there are a lot of courses with 'games' in the title and it can be confusing when there is so much choice. It is vital to do research into a course before you apply, go to the open days, try and speak to people on that course, ask about their track record for getting graduates in to employment, check to see if the course is accredited by the industry. Putting time in to selecting the right course is invaluable.

Many graduates struggle to get a job once they have graduated. Employers receive so many applications for each position they are advertising that it can be hard to get noticed.

> ***"I believe that there is a lack of positive education about women in the games industry when it comes to career counselling for the younger generations."***

My advice is to make every word and image count. CVs should be well laid out, communicate who a candidate is, their strengths and what they have to offer to the company and the role they're applying for. Portfolios should only contain the best of a person's work – five high quality images are better than ten mixed quality images. It's all about clear communication and quality.

Getting noticed is only the first step. Once an interview is secured, there's more preparation to be done to ensure the candidate gives themselves the best possible chance of achieving their dream job.

They need to show they are passionate about games and the field of the industry they want to work in, but this needs to be balanced with a friendly, diplomatic attitude and a willingness to work with others.

They'll be spending a lot of time with the people they'll be working with so it's important that they can communicate well with people at different levels.

AN EQUAL FUTURE

The games industry is still growing and, as it develops, new opportunities will arise for those willing to put in the necessary time and hard work. Today's students and wannabe developers could be tomorrow's industry leaders, shaping the future of games. If that future is going to include more games which represent women realistically and appeal to them commercially, then more women need to get involved in all areas of development.

Schools, colleges and universities need to deepen their understanding of the games industry in order to ensure they are offering the most relevant courses and the best paths to a solid education for games development to all young people with an interest in the industry. Work experience tutors and careers advisors should present games industry jobs as a viable option for those with science, maths and art backgrounds.

Games companies should be looking to provide positive role models, particularly to female students as women are still so underrepresented in the industry. It is only through seeing and speaking with women already in the industry that the next generation of female developers will gain the knowledge and confidence they need to take the next step towards their gaming career. ■

Sophia Coney is director of publishing at Lockwood Publishing. She has a hands-on role in projects, while encouraging more women to consider games as a career.
www.lockwoodpublishing.com

HOW MUCH ANIMATION IN AN HOUR?

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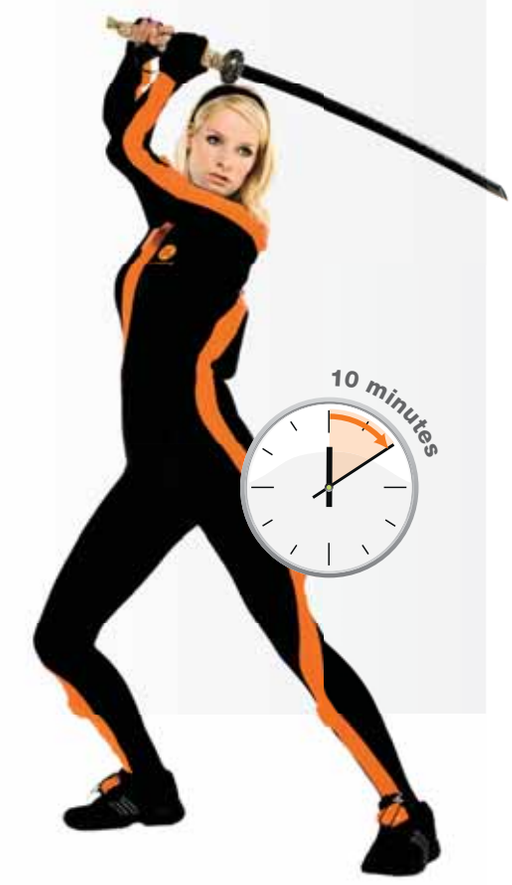

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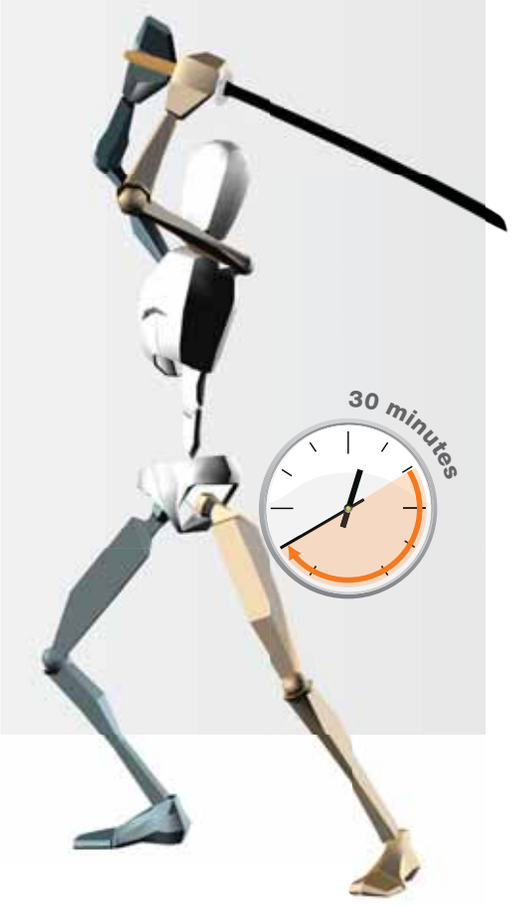
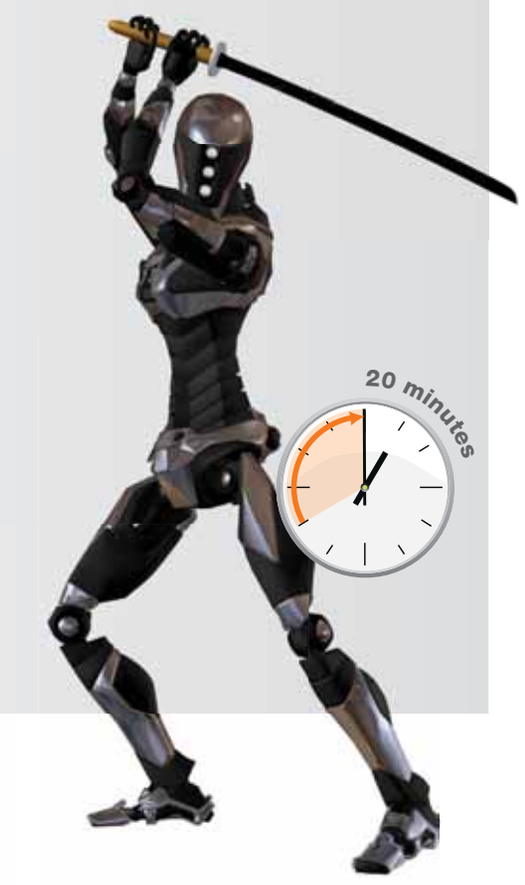


Finish animation in final pass



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THE LATEST TOOLS NEWS, TECH UPDATES & TUTORIALS

Massive Attack's producer on Halo 4 p51

Caught in the act

Motion capture specialists give you a snapshot of the sophisticated methodologies that are absorbing performances by the likes of Ellen Page, and recreating such spectacles on-screen, p38

2D asset tool Objecty p42

HeroEngine 2 amps up the MMO p47

Moving with the times

As motion capture technology advances, new trials for directors, actors and designers are emerging. But where there's challenge, there's opportunity, discovers **Will Freeman**, as he talks to the discipline's finest

Top-to-bottom: Guillaume de Fondaumière, Heit Beute and Mark Lewis

IT WAS THE mid-nineties when motion capture was first used in video games.

Since then, the technology has become as close to a household names as any games development jargon has, in no small part thanks to the animation technique's parallel prevalence in cinema.

Back in the previous issue of *Develop*, we turned our attention to the world of character animation, the umbrella term under which motion capture falls. But motion capture deserves special attention in its own right. In many ways it is the most elaborate games development method, where entire warehouses, hundreds of highly specialised cameras, dozens of actors and stuntmen and even large scale physical sets are required simply to animate scenes or characters.

And yet with the arrival of Kinect, a simple motion capture technology now exists in the living rooms of millions of consumers. There lies the potential for new game experiences that offer more natural interactions for users.

Somewhere between those two ends of the spectrum, indie and small-to-medium sized studios are now making motion capture an ordinary part of their production process, and elsewhere hardware outfits are creating all kinds of varied solutions, including markerless and cameraless offerings.

So where is motion capture going, and how can your studio be sure to get the most out of it?

A MOTION FOR CHANGE

"Although the ground rules of motion capture haven't changed much since it was first introduced, we have been witnessing some considerable improvements in the past few years," offers Guillaume de Fondaumière, co-CEO of *Beyond: Two Souls* studio Quantic Dream, by way of introduction.

> ***"The ground rules of motion capture haven't changed much, but we have been witnessing some considerable improvements."***
>
> Guillaume de Fondaumière, Quantic Dream

"Systems have been pushed forward to become more accurate, offering in particular the possibility to track very small markers from relatively large distance. Very subtle facial movements can now be captured with fewer cameras and with far less constraints than in the past."

Certainly, there is still room for improvement in the mo-cap realm, but the technical limitations of motion capture are somewhat less restraining than the method's impositions to performance. Motion capture must continue to evolve to be ever more user-friendly to directors and actors, but from a technology perspective, it has come on leaps and bounds in recent years.

Prices are coming down too, and despite the convoluted nature of adopting mo-cap's physical nature to create a virtual product, it is becoming an affordable animation option.

"Beyond that, full performance capture [where body, face and audio are recorded from a single performance] is introducing new possibilities in storytelling," adds Jay Granier, director of technical operations and hardware and software facial animation specialist Faceware. "Gameplay will become more story focused and the ways we as players interact with characters in-game will only get better and more enjoyable."

Optimistic stuff indeed, and all around, despite tough economic times and an industry undergoing enough seismic shifts to shake established practices to the ground, there is positivity in the mo-cap sector.

UK *Total War* developer The Creative Assembly, which recently built its own mo-cap space (*see panel 'Mo-cap it yourself'*), is home to one of those optimists; namely motion capture manager Pete Clapperton.

"Relative to early systems, the technological advancements up to now have been astounding," he says of mo-cap. "I believe that high fidelity markerless

technology will be the next big leap forward, allowing for greater versatility from both the performers and directors, and subsequently the animators."

'Markerless' and 'cameraless' are certainly popular words in mo-cap today, as numerous companies work to build more accurate alternatives to the established 'markers and camera' set-up, that while proven, can inhibit actors' movement and performance.

One such solution is Xsens' MVN Motion Capture system, which consists of inertial sensors attached to the body by a lycra suit.

"Motion capture used to require motion capture operators and a dedicated office space with low lighting condition," explains Xsens product manager Hein Beute. "Xsens MVN allowed animators to work with motion capture as just being another tool, and to be able to go use it in any place with little training. The accessibility and ease of use are pushed forward together with the ability to capture full body, but also face and hands."

But cameras are still commonplace in the world of mo-cap, and according to those producing them, they have the power not just to impact animation, but inspire game mechanics and fuel productivity.

That's especially the case in the example of in-house motion capture facilities, where the quality and volume of animations games designers have at their disposal is immense.

"Suddenly, the animation budget becomes significantly less constraining as designers dream up complex narratives or highly immersive player control paradigms," says Jim Richardson, CEO of motion capture and tracking hardware specialist OptiTrack. "Ultimately, the execution rests on the talent of the dev team, but incorporating mo-cap into storyboarding and production processes can shift character animation from a pipeline pinch point into a tool for leveraging productivity and clever new designs."

> ***"Good quality mo-cap is certainly within reach of almost everyone these days thanks to consumer cameras like Kinect."***
>
> Jay Granier, Faceware

SPEAKING THE TRUTH

Of course, it would be unrealistic to dwell exclusively on the opportunity within mo-cap, without addressing the challenges that face animators. Indeed, embracing the future means tackling the trials of today.

From Quantic Dream's perspective, motion capture is a means to capture the 'truth' of an actor's performance, which means that effort must be spend on mastering the creative end of the motion capture scale.

"From a directing and actor performance perspective, a change of paradigm would be necessary to truly mark a departure and enable us to step into new territory," offers Quantic Dream's de Fondaumière. "Markerless systems could for instance one day enable us to capture actors in costume – and not in silly suits – and/or within real sets."

For more on the change needed to better serve actors, directors and the art of performance, be sure to read the panel 'Acting up' (*page 40*).

Another challenge is – understandably considering the make-up of mo-cap – a matter of education, and it's something Mark Lewis, head of sales at motion capture company Animazoo sees as vitally important for pushing things forward.

"One of the challenges we have is educating clients on the differences between consumer and professional standard mo-cap systems," states Lewis, who's employer provides motion capture suits that negate the need for cameras.

"Very low cost consumer systems can provide your mo-cap data, but some users forget to consider data processing and cleaning time into their calculations. Trying to work with bad data can take longer than key framing so managing expectations is key."

But, says Lewis, the pressure on motion capture to improve across the board is driving the discipline forward for the better.

"The economic pressures on studios mean they now have to deliver more with less," he insists. "This is driving us to constantly innovate and push our technology to its limits to provide better quality data at lower prices. Gamers want more realism so consumer pressure will drive studios towards tools that allow them to deliver this."

The real challenge according to Mick Morris, MD of mo-cap service provider AudioMotion, however, is a matter staring the industry in the face. The human face is, of course, the most expressive part of our body, and at the very center of almost any performance. Captured incorrectly, it can let an entire game down, and it is still tough for mo-cap solutions to grasp the essence of.

"One of the key challenges still involves facial capture," explains Morris. "We can record the performance using headcams, without headcams, markers, markerless or a hybrid approach. We will typically shoot on a sound stage with a full crew to ensure the best possible results with final audio. However, if a face hasn't been rigged properly or given the love and attention that is lavished on other aspects of character work then all of these efforts will negated when it comes to the final result."

MOVING ON UP

Despite those challenges, optimism prospers, and in one area in particular.

Today, motion capture is in reach of not just middle-sized studios, but true indies and microstudios. It's partly down to economies of scale, which has democratised the availability of hardware, and it's undeniably a point of much industry enthusiasm.

"Good quality mo-cap is certainly within reach of almost everyone these days thanks to easily obtainable, high quality consumer cameras like the Kinect and the abundance of software being released for it," confirms Faceware's Granier, before adding the qualifier: "Larger scale projects utilising full performance capture and multiple performers tend to require large volume stages and higher quality solutions due to the scope of work being done and quality of data required."

MO-CAP IT YOURSELF

Creative Assembly's newly constructed mo-cap studio in West Sussex, and (inset) Jim Richardson of OptiTrack

WHILE MO-CAP REMAINS predominantly the realm of service providers, a number of studios have set up their own in-house facilities.

Quantic Dream, for example, decided to invest in its own motion capture studio in the year 2000.

"Back then, systems had started to become reliable and cost efficient if large amounts of realistic body animations needed to be produced," explains the studio's co-CEO Guillaume de Fondaumière. "We also sensed that this technique could one day enable us to capture the complete performance of an actor and render it in-game in all its subtlety, provided we had the system at hand to develop tools and techniques adapted to the specific constraints of real-time."

For UK studio The Creative Assembly, meanwhile, it was a matter of housing an increasingly large collection of mo-cap equipment, and the realisation a space could be used for more than just 'filming' scenes.

"It became obvious that we needed a permanent space to house what was now a reasonable sized system with a lot of potential for additional use such as pre-visualisation, cut-scene work and real-time streaming of actor data to define a better quality of animation assets," explains The Creative Assembly's motion capture manager Pete Clapperton.

And according to Jim Richardson, CEO at motion capture and tracking hardware outfit OptiTrack, in house studios are set to become more common.

"The industry's largest studios are increasingly interested in building out a host of mo-cap studios across their entire development network," offers Richardson. "In the past, they might fly remote teams to a major regional facility for a few days of capture on a major project. Today, triple-A satellite studios can build their own systems, and take care of all of their production requirements in-house."

BEYOND THE VALLEY

ARE WE REALLY set to pass beyond the oft talked about uncanny valley? Hein Beute, product manager at Xsens argues that, if we are to, it will take the human element of mo-cap to make it happen.

"Believable and lifelike motion are always important, and the best results have been achieved when animators were involved in the final animation pass creating lifelike motions," he says. "Having a natural human-like solve as a starting point will help the animator a lot, and therefore the uncanny valley is still relevant today."

Ellen Page (above) embodies a troubled young woman with paranormal abilities in Quantic Dream's Beyond: Two Souls

ACTING UP

MOTION CAPTURE IS a technological development, but according to Guillaume de Fondaumière, co-CEO of Quantic Dream, effort is needed on the creative side of the specialty.

"Now that the technology is mature, we can only advance to the next stage if we level up the artistic side of things," he insists. "We obviously need to attach talented actors – even A-list actors – but that in turn means they need to be presented with stories that make sense and good dialogues. We will also need professional directors, sound engineers, etcetera."

"Performing in a motion capture suit is a specialist skill so more training and exposure to motion capture systems would benefit the next generation of actors," adds Mark Lewis, head of sales at motion capture company Animazoo, in agreement. "A number of Universities and drama schools are teaching performance capture techniques using our systems to give their students the best possible preparation for a future where mo-cap could provide their livelihood."

Better serving mo-cap actors should help make the games more convincing.

From top: Mick Morris, Pete Clapperton and Jay Granier

But the mo-cap opportunity for small studios is real, and Granier is not alone in highlighting it.

"Mo-cap hasn't hit a point of ubiquity just yet, but OptiTrack alone has enabled well over a thousand new studios across our markets to create stunning content using motion capture," says Richardson, who's company today serves both triple-A giants and diminutive teams. "And it's not just the adoption rate that we're excited about," he adds. "Indie studios and start-ups now have access to $10,000-to-$20,000 systems that can outperform $100,000-to-$200,000 systems sold only 10 years ago."

It's easy to get carried away, of course, and see indies as the new champions of mo-cap, but pragmatism is still needed, as it remains the case that the animation technique is complex and intricate.

"Motion capture is now available to all but quality remains the issue," suggests Animazoo's Lewis, who, while positive, sees that the practice has some way to go before it is truly democratised. "There will be a day where motion capture is the default process rather than something reserved for the biggest studios. The trickle down of technology improvements into lower cost systems means the quality of data delivered at a budget is constantly improving."

CLEAR THE HOLODECKS

With so many methods, technologies and perspectives, motion-capture is a bewildering speciality, but one that many see as set to benefit from collaboration, as Faceware's Granier details.

> ***"A fortress mentality is not appropriate in the creative industries. Our clients, quite rightly, expect solutions, not excuses."***
>
> Mick Morris, Audiomotion

"Forming partnerships is becoming more and more important for tool providers as well as service providers in today's industry," he says. "Clients are often looking for a turnkey solution that services all of their needs ultimately puts a company in a better spot to give them what they're looking for."

"We are currently collaborating with at least half a dozen different companies who are specialists in face rigging, coding, middleware and other disciplines," adds Morris, who argues that it is important that companies like his recognise core strengths.

"A fortress mentality is not appropriate in the creative industries. Our clients, quite rightly, expect solutions, not excuses."

As for motion capture's future, it absolutely looks in rude health, and it may be that Kinect has a lot to do with that. It has democratised both the hardware and understanding of motion-capture, and turned it from the reserve of the elite to a fairly normal living room function.

"Low cost controllers that use motion capture technology are already making their way into peoples living rooms, so expect motion capture to become more widely understood and accepted by the public," says Lewis, before going on to titillate Trekkies across the globe. "Games that fully utilise the potential of movement sensing technology will take player engagement to new levels. The holodeck may not be that distant."

The last word, though, goes to de Fondaumière, who is already looking to the next generation of games consoles in his quest to capture that true essence of an actor's performance.

"More memory and rendering capabilities will lift some of the constraints we face in real-time," he says. "The next generation will certainly bring us much closer to what can be seen in the most sophisticated films or rendered CG productions." ■

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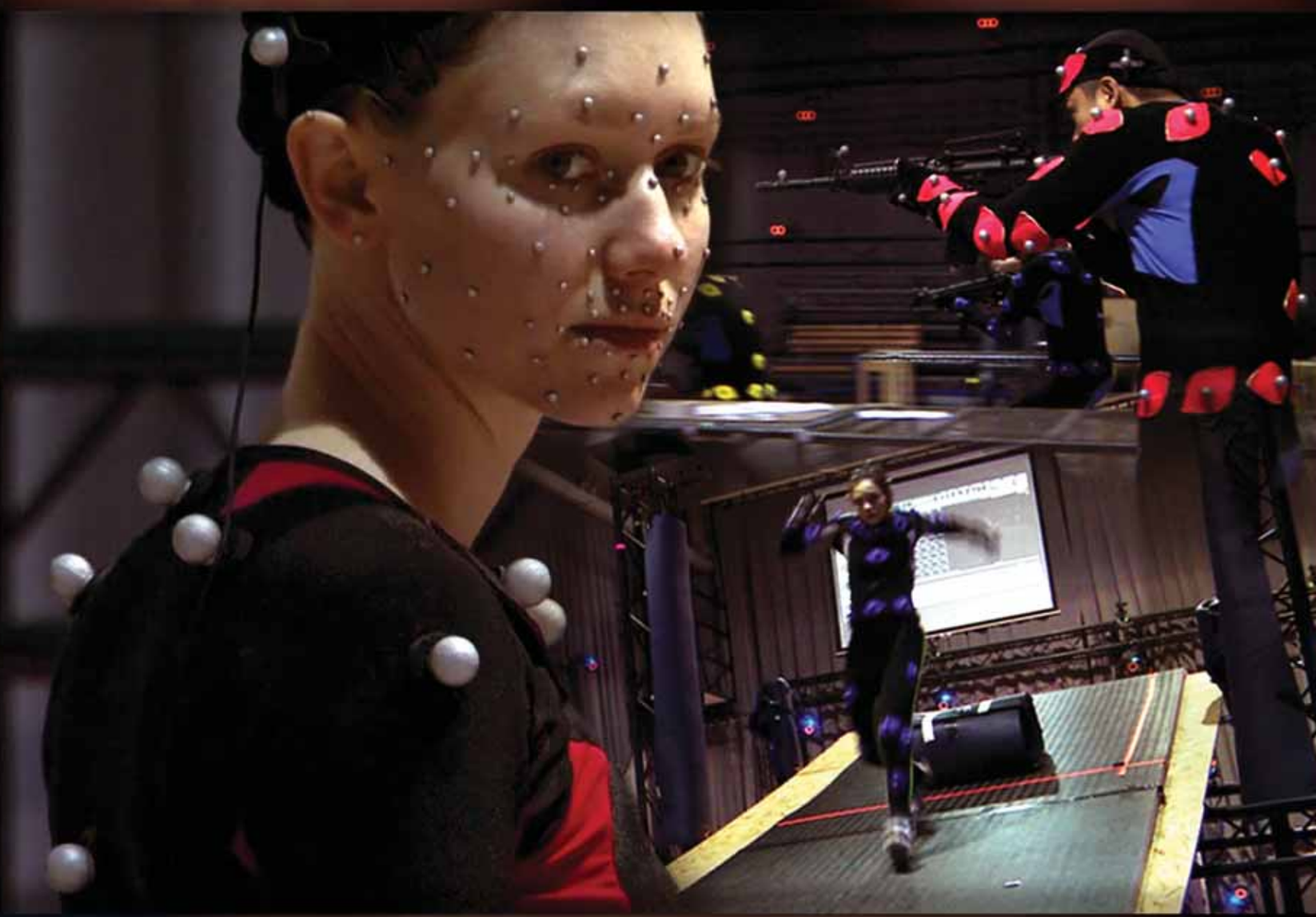

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An Objecty of desire?

Jon Pittock is an indie developer with a taste for building middleware, and he's using Kickstarter to fund Objecty, a 2D asset tool. **Will Freeman** asks what the tool is, and why crowdfunding was just right for his self-starter ethic

Top-to-bottom: Jon Pittock of SKN3 and Richard Vanner of The Game Creators both turned to Kickstarter for their tools projects Above: Objecty in action

What is Objecty?
Objecty is a tool that will help games developers to create their 2D assets. It allows them to then export those creations into their existing engines. So Objecty doesn't require a change of engine, say to Unity or XNA or anything else. Users can use Objecty with their existing engine.

So what engines will Objecty support? Will there be a focus on mainstream engines, for example?
For launch we're working to support a select few popular engines, but we have a LUA exporter and offer access to the API, which means we can support existing libraries in our user's language of choice.

And who have you built this tool for? Who do you see using the engine?
I'm an indie myself, so it's primarily for people in a similar situation to me. But it's suitable for everyone ranging from hobbyists and indies through to small to larger studios. These days even the largest studios make 2D mobile games, and use tools like Objecty, which could serve them. Really, this tool is made for anyone making games.

You mention being indie. What is the make-up of the team behind Objecty?
Primarily, it's me as the main programmer and artist, but then I have a team, including Dave Moore who is doing all the testing and Caroline Bloxham who's doing the support and promotional stuff. As for our background, I've been making games for as long as I can remember on a hobbyist level, and I set up a small freeware group, which is still active, called Acoders. I've also worked in web development for about five years. Games finally drew me back from that, and so I set up SKN3 to work on tools.

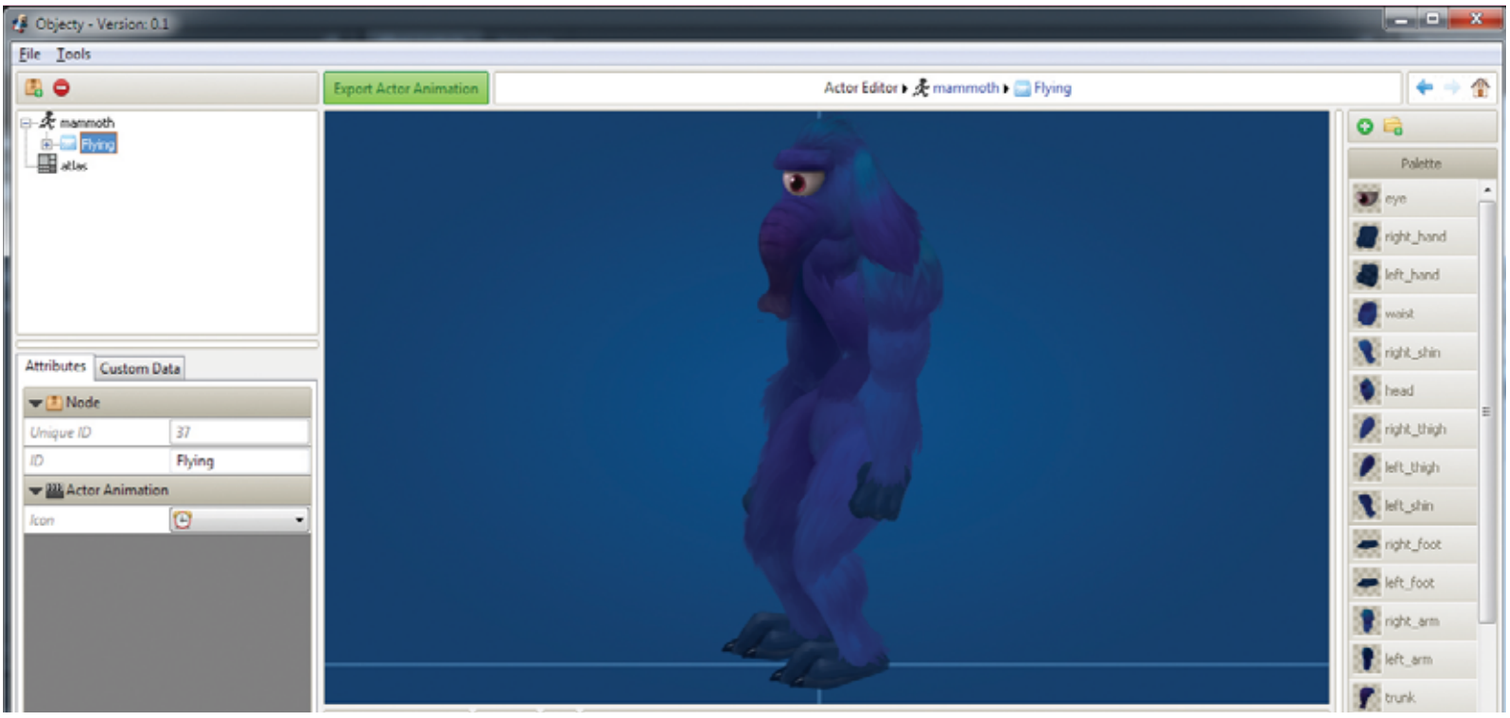
> ***"You're not going to be presented with an entire screen of complexity where you have to sift out the way you do things."***
>
> Jon Pittock, SKN3

And why tools development instead of games development?
Because for pretty much every game I've ever made, apart from the odd very specific type of game, I've had to make my own editors or small utility to manage data, build levels and so on. So it occurred to me that a tool could be made to stop me having to ever do that again; a tool that others could use side-by-side with their engines. Spotting the gap for a tool like Objecty came from me needing a tool just like it when I was making my games.

And in terms of the platforms Objecty supports, presumably that is dictated by the engine your tool is applied to?
It absolutely depends on the engine, but it's certainly applicable to mobile across devices like iOS and Android, and all kinds of other devices. That's because Objecty is platform framework independent.

What about the UI and frontend of the tool? Does Objecty adopt a model that developers would likely be familiar with?
If you've spent time with Paintshop Pro or an icon-driven editor it should be fairly familiar. We tried to focus on making Objecty have the vague feel of a website, so your dialogues, for example, will be quite contextual. You're not going to be presented with an entire screen of complexity where you have to sift out the way you do things. Put simply, I'd compare it to a web experience combined with an art package really.

What about the feature of Objecty you feel will have the most significant impact on games developers that embrace the tool?
We're definitely most excited by our skeletal animation features. We know there's other products out there that can do something



similar, but in this case we are sure none of them are as good as Objecty. What makes Objecty's skeletal animation system better is that it allows for the creation of characters out of smaller pieces, and then we can animate them with tweening and keyframing. Putting that into game means more fluid animation and there's no need for a device that has a huge amount of hardware capabilities. There's no need for a massive computer to run the program, as it is only storing those individual parts and then animating on the fly. With Objecty's actor editor we've made it as simple as possible to create really fluid animation.

And why should a developer consider using your tools when there are so many more established middleware providers out there?
SKN3 being independent itself is an important feature. At root, this is about games. Objecty isn't about trying make hugely large sums of money or trying to build our team to one that keeps hundreds of people employed. We're a very small company so we can focus on the ideas that are important to help people make games. One of the issues with larger tools is that they become increasingly bloated, and they often miss adding the small details people are crying out for. With our scale and independence, I can remain connected with our users, and I myself can be looking at the community and listening to what they need.

So why go with Kickstarter to fund the tool? What did it enable that you couldn't get elsewhere?
Initially, we backed Objecty with our own money and savings, and when that ran out we had to look at options like bank loans or investment. At that time Kickstarter was becoming popular, and we saw the occasional tool do well on Kickstarter. I guess you could say we were riding on the success of others who paved the way for tools on Kickstarter, but we think it's a good way to connect with other people. Kickstarter allowing UK teams to put projects on the website was perfect for us. And it's the right 'scene' if you like, of people who use Kickstarter and would be interested in our tool. There's an overlap there, of our audience and those into Kickstarter.

And what about Kickstarter letting you keep your independence? Is there a reality to that idea?
Absolutely. We can set our opwn boundaries and decide on our own terms how the project is going to run. We've got no investors telling us what to do, and it's up to us to raise the funds and keep the project going. I'd definitely say Kickstarter allows us to focus on keeping Objecty independent.

> ***"You could say we were riding on the success of others who paved the way on Kickstarter, but we think it's a good way to connect with other people."***
>
> Jon Pittock, SKN3

If your tool passes its Kickstarter goal, how will the pricing model for prospective Objecty customers work?
There will be three licenses. Their final details are yet to be decided, but there will be an 'independent', a 'pro' and a 'studio' option. The independent version will include all of the features at a low price in a trial form, you you'll get a year's trial with that package. Pro's the next step up, and an option to get a lifetime license. You can find a demo on our Kickstarter page or on our website. ■
www.skn3.com
www.kickstarter.com/projects/skn3/objecty-2d-game-development-made-easier

CROWDFUNDING RELOADED

OBJECTY ISN'T THE only new games development tool on Kickstarter as a result of the crowdfunding platform opening its doors to UK outfits. In November, The Game Creators embraced Kickstarter to fund a reboot of its indie-targetted shooter engine FPS Creator.

"Our project is FPS Creator Reloaded," explains The Game Creators' owner Richard Vanner. "The main aim is to improve the engine in areas where it was clearly weak. We successfully created a very easy to use editor but failed to deliver the gaming experience. Things have moved on now; we can throw out the poor ODE physics engine and replace it with the industry-renowned PhysX engine. We want to expand the size of the world in which developers can create their games and we want to support the model formats that they prefer."

Targeting FPS Creator Reloaded at hobbyist developers, Vanner is convinced Kickstarter is perfect for making contact with a new kind of consumer that might be interested in not just playing, but also making games.

"Our demographic focus is aimed more squarely at consumer's who are interested in games development," he explains. "So far we've found our community have backed the project very strongly and we're now reaching out to see if we can appeal to a wider audience. Kickstarter will also give us a view if our ideas are wanted or not. It's best to find out now and not later when we've spend a year on development. We're a very small team and we're self-funded; if we can rein in funding early then that helps pay the bills.
www.kickstarter.com/projects/tgc/fps-creator-reloaded

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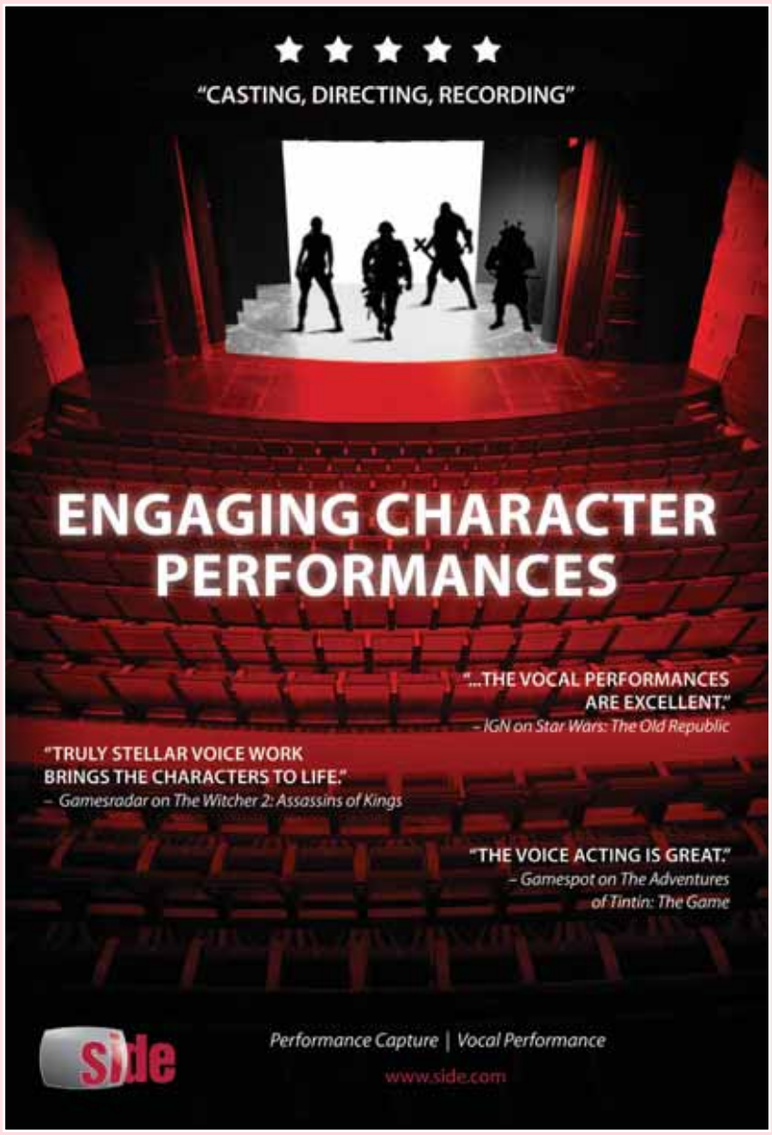
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KEY RELEASE

Will Freeman looks at how online games engine HeroEngine 2 has reinvented its forbearer

WHAT IS IT?
A newly released version of the online gaming engine and server structure
COMPANY: HeroEngine
www.heroengine.com

IT'S NO SURPRISE that the new *Hero Cloud 2* online game engine introduces a wealth of new features. It is, after all, a major update to a well-established development platform.

The motivation for introducing the likes of high dynamic range rendering, however, isn't as obvious as you might expect. It's indies that the tech's creator Idea Fabrik is keen to serve, as more and more small-to-medium studios start creating the kinds of MMO games that HeroEngine 2 and its predecessor were built to support.

Bolstering a platform – one that has typically served large studios with triple-A ambitions – with extra features to attract indies might seem like a counter intuitive logic, but to it makes sense to the team.

"Previously it had never really been a focus of ours to have every aspect of the client be cutting edge, because when we sell to triple-A developers, we're selling them our simulation and server backend," explains Idea Fabrik's product manager Cooper Buckingham. "That's always been our special sauce, so we never focused on making sure we had, for example, every shader in place that a game could possibly use, because we figured that those large triple-A developers were just going to gut much of that client-side of the tech and make it their own."

SERVING THE SERVERS

To a certain extent the first HeroEngine provided a gateway to and interface with the server backend. Now that entry point has become festooned with features, meaning even studios without a toolbox of proprietary tech can make the most of the engine, all the while still harnessing Ideak Fabrik's server-side tech. There is now less need for a studio to implement its own extensions, meaning smaller teams with more modest budgets can now embrace the engine.

"For HeroEngine 2, we've done a far more robust client-side implementation, in order to give independent developers all they need in one place to ship a triple-A quality game," confirms Buckingham.

> ***"We've built in at the engine level all these foundation pieces for traditional online game systems."***
>
> Cooper Buckingham, Idea Fabrik

That logic comes from Idea Fabrik's certainty that as the infamously overcrowded mobile space continues to squeeze out smaller studios, a substantial number are returning to the platform on which the new era of indie gaming was arguably born – the PC. And so it is that HeroEngine 2 has evolved into a feature-rich solution which allows developers to build games in the cloud so an entire team can collaborate live, online and in real-time.

CATCHING CONSOLE

The Idea Fabrik tech team's true goal with crafting HeroEngine 2 was, they say, to push the quality of massively multiplayer games closer to that seen in offline triple-A console games. As MMOs have to prioritise huge live spaces populated with hundreds upon hundreds of simultaneous players all the while keeping download sizes small, sacrifices have to be made that typically impact graphical polish. But with the aforementioned HDR rendering introduced, along with features like Maya and Max 2012 support, improved custom shadows, tone-mapping, streamlined language localisation and expanded middleware integration, HeroEngine 2 is starting to offer online games developers the same kind of performance that was once the preserve of solutions like Unreal and CryEngine.

And for those studios unfamiliar with the intricacies of building networked games, HeroEngine 2 includes a newly updated Foundation Framework, conceived to ease the pain of embracing the sometimes unwelcoming world of online development.

"We've always been an engine that gives you the tools, but then you had to go and do everything yourself," says Buckingham. "It was pretty tough for somebody new to online games development. So what we've done now is build out huge chunks of, for lack of a better word, code, that are relevant to many different types of online game.

"We've built in at the engine level all these foundation pieces for traditional online game systems; things like chat and social and guilds and inventory and lobby systems and multiplayer pairing systems. Those systems to support those features exist at engine level, and users can choose to hack into them in whatever way they want, and then expand on them and manipulate them."

With HeroEngine 2, Idea Fabrik appears to have pushed almost every element of its technology, taking the solution from the realm of a highly specialised piece of middleware into the mainstream of the games development sector.

For now, how the company will charge for their tech is evolving, and currently starts at $99, but it is looking to make money from its servers, rather than the HeroEngine 2 platform directly.

Those pondering building an online game might do well to investigate the potential of Ideak Fabrik's newly released piece of tech. ■

Cooper Buckingham of Idea Fabrik (above), whose employer has released the tech behind online games, like Repopulation (main)

EPIC DIARIES

Mark Rein and **John Gaudiosi** look at Unreal Engine 3's impact on the fighting genre's latest challenger

The Dark Knight's work is never done (above), as the caped crusader battles villains and other DC universe heroes in Injustice

NETHERREALM STUDIOS HAS been working with Unreal Engine 3 (UE3) technology since it was part of Midway Entertainment. The Chicago-based studio has focused on fighting games, establishing itself with the bestselling *Mortal Kombat* franchise.

After exploring a hit crossover a few years ago with *Mortal Kombat vs. DC Universe*, the Warner Bros. Interactive-owned developer has returned to comic book lore with the original fighter, *Injustice: Gods Among Us*. The game, which features iconic super heroes including the Dark Knight, Superman and Wonder Woman, was designed using Unreal.

"We're always making advancements," says Ed Boon, creative director of NetherRealm. "This game has much more dynamic lights in terms of lighting the environments and the characters. It showcases a lot more detail than what we had going in the last *Mortal Kombat* game.

FIGHT RIGHT

Boon said his team has made optimisations that particularly cater to the fighting genre, since games such as *Mortal Kombat* and *Injustice* feature large characters that rely on heavy motion capture animation.

"We have a faster rendering engine, so we can put more on the screen running at 60 FPS," he explains. "We have a great memory manager that lets us have multiple arenas for any fight, so you can knock someone from one arena into the next. *Injustice* is reaping the benefits from all of these steps forward that we took since *Mortal Kombat*."

In addition, Boon explains that NetherRealm has crafted a scripting system for implementing animations and moves specifically for its fighting games. "This is proprietary technology that we've added to Epic's engine. It's a more code-based component than a visual interface, so it lets us iterate, speeding up animation, slowing down changing collisions and all that. And it allows us to do all of that with a very fast turnaround."

Boon also reveals that the team's experience with Unreal Engine technology over all of these years has made it easier to add these types of modifications.

"UE3 gives us a great way to start off running," states Boon. "With Injustice, we can put characters in and start animating right off the bat. We're improving the systems with each iteration."

KORE IP

Unreal Engine 3 has allowed NetherRealm to focus on innovating the fighting genre, which has always relied on technical breakthroughs to create the experiences fans desire. While the last *Mortal Kombat* game was the best-selling in franchise history, the studio sought to make something completely original this time around.

"Our main goal was to do another fighting game that was completely different than *Mortal Kombat*," confirms Boon.

"When we joined the Warner Bros. family, we looked at their wealth of intellectual properties and the DC heroes seemed like a great fit for it. We had actually worked with them before on *Mortal Kombat vs. DC Universe* and we wanted to do something that was focused on celebrating the whole exaggerated world of superheroes.

"So instead of doing things like swinging a sword, you swing a car. Instead of knocking somebody down, you throw them through a building. We really wanted to exaggerate all these events and create this hyper-realistic battle of the gods' world, and that's what Injustice is."

Injustice: Gods Among Us is one of 2013's highly anticipated Unreal Engine 3-powered blockbusters, coming to PlayStation 3, Xbox 360 and Wii U. ■

Thanks to Ed Boon at NetherRealm for speaking with freelance writer John Gaudiosi for this feature.

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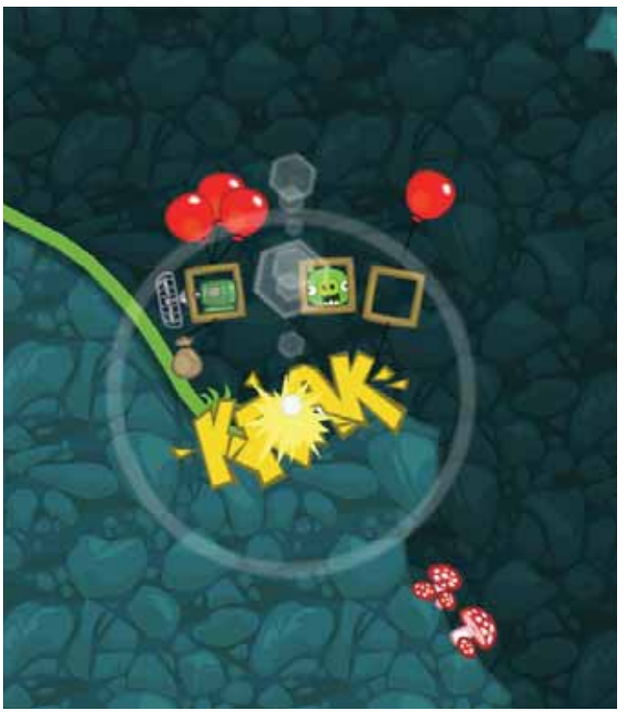
UNITY FOCUS

Rovio chose Unity to prototype Bad Piggies, then used it for the final game

BAD PIGGIES
Developer: Rovio Entertainment
What is it? The latest in the *Angry Birds* franchise, from Finnish mobile outfit Rovio
www.rovio.com



Rovio's Jaakko Haapasalo is producer of Bad Piggies (above), in which the porks take flight and attempt to clear levels in wacky contraptions (main)

WHEN ROVIO BRAVED moving the *Angry Bird*'s franchise away from the familiar catapult and avian formula, the developer picked Unity to install beneath the bonnet.

The game in question is, of course, *Bad Piggies*, which reimagines the physics puzzler format that made *Angry Birds* a true phenomenon of mainstream culture.

This time it's the swine that hogs the limelight, tasking the player with building various vehicles and contraptions from a toybox of Rube Goldberg clichés, such as springs, bellows and levers.

A QUICK START

And, as is often the case, it was prototyping that first attracted Rovio to Unity.

"We did the prototype in Unity, to try it out," explained Jaakko Haapasalo, *Bad Piggies* producer and now head of studio. "We realised that it was a quite productive platform, in terms of developer productivity and fast cycle time. The resulting prototype was high-quality, so we decided to go straight into production."

And so it was that another developer had transferred from using Unity as a prototyping tool to adopting the engine for full production. In Rovio's case, it was the core development environment within Unity that convinced the team the tech was the platform for them to make the piggies the star.

"The integrated development environment is productive, and it's also scriptable and extendable," offer Haapasalo. "So we were able to streamline our process in a couple of places, like sprite management, in exactly the way we wanted. The cross-platform just works; it's practically push-button deployment."

Push-button deployment it may be, but of a quality enough to give Haapasalo and his team the flexibility to build a game they are particularly proud of.

"I think the interaction between the different gadgets is so rich that players are already creating a lot more different types of contraptions than we ever imagined," states Haapasalo of the element he is most proud of in *Bad Piggies*. "The richness in what you can imagine and put together is just amazing."

> ***"We realised that it was a productive platform, in terms of developer productivity and fast cycle time. The resulting prototype was high-quality."***
>
> Jaakko Haapasalo, Rovio

TOUGH PIGGIES

Of course, the making of *Bad Piggies* wasn't without challenge, as Haapasalo explains.

"The production timetable was quite tight," he says. "We also had to find a balance between emergent physics and all the complexity that can bring. It could easily have been way too difficult, or too restrictive, and we had to strike a balance. I think we got the perfect balance in the end. You want as much freedom as you can give, but without the complexity that usually follows."

Fortunately for Haapasalo and his colleagues, Unity rose to those challenges, enabling rapid tweaking for game balancing.

"The cycle time in developing new gadgets and tweaking the physics was very short, so we could do a lot of iterations in a very short period of time," explains Haapasalo. "That meant we could do a lot of gadgets in a short period of time, and once that was locked, we could work on the levels and it made it much easier, so we didn't have to revisit it too many times."

Unity also allowed the Rovio team to easily capture the immediately recognisable style of *Angry Birds*, thanks in part to the engine's readily scriptable editor and pipeline. Rovio's development team uses in-house atlas management tools, so needed to undertake a little rewriting on top of Unity, but the team report they found the process minimally disruptive to their workflow.

And Unity's influence on the game has been substantial. In fact, one of the core in-game items came to be as a direct result of Unity's influence.

"One example would be the spring, one of the gadgets you can use in the game," says Haapasalo of Unity's influence. "That was something the programmers did in one afternoon, as a fun thing to try out, and because it was so easy to develop and test out, we decided on the spot to put it in. So that would not have happened if we had had a longer cycle time in gadget development."

The fun revolves around building physics-based contraptions to hurtle through 2D levels. It's a simple idea that required precise execution. With *Bad Piggies* out of the sty and into the hearts of the public already, Unity has another great product to add to its release roster and Rovio have once again beguiled the gaming public with the exploits of some long besieged swine. ■

HEARD ABOUT

John Broomhall talks to Massive Attack producer Neil Davidge about his role in Halo 4

Halo 4
Developer: 343 Industries
Platforms: Xbox 360
www.halowaypoint.com

WHEN NEIL DAVIDGE played the first *Halo* game on breaks from writing, producing and mixing duties for iconic Massive Attack albums, like *Mezzanine*, he could never have guessed that a several years on, he'd be scoring *Halo*'s fourth iteration.

Now, Davidge reflects on his prestigious games gig: "When I first met the team there was good chemistry and I think the fact that I've been a *Halo* fan right from its beginning really helped. I've been working on electronic music for many years, but I also have a pretty authentic touch with emotional music. There's a real blending of human and machine and a lot of sound design – I think that was a big pull for them.

"I'd been listening to Marty O'Donnell's (original *Halo* series composer) music for ten years. If I'd allowed myself to think about following on from that, it would have been daunting. I mean, he's the dude. He helped make game scoring into a serious art. The music was probably a third of what made the original game so successful in the first place. I tried as much as I could to put that out of my mind and just write from the heart in a progression from what he's done, rather than a complete revolution."

PALATABLE STUFF

"I think there's a far more expanded sound palette in this score; a lot of very original sounds created specifically for the game, making the music very individual. I create instruments by a lot of processing. For instance, I might take the rich orchestral sounds from our Abbey Road recordings then play around de-tuning, processing and editing to produce something unique.

"Overall, it's quite a different experience for me compared with film. Of course, there are certain fundamentals that are the same – finding the emotional context, personal expression, and obviously sound creation, innovating, experimenting, recording – all of that side of the process is the same; I go to the same places. But in terms of the technicalities of how you actually present a piece of music, how you compose that piece of music, what format you use and how you deliver it; I found all that very different and I guess in terms of comparing film score to game score, the way that you actually interact with the client is quite different too, much more involved.

"It's less clear-cut and there's quite a lot of hoping that you're going to hit the nail on the head, that you will find the thread, and then you're presenting music to the client and crossing your fingers, hoping they like it, and that it fulfils what they're looking for. Then they'll come back with comments asking, 'Can you change this', 'can you expand on this', or 'you've presented us with three ideas here – we like the first half of the first one and we're not really feeling the others'. You create a lot more music for a game than a film. For this project, I probably wrote about seven hours of material. I think we finally delivered just over four hours' worth of recordings, so it's a vast amount to write and you're often producing four pieces a day."

> ***"There's a far more expanded sound palette in this score; a lot of original sounds, which make the music very individual."***
>
> Neil Davidge, producer

EVOLVING INDUSTRIES

"Also, a game is constantly evolving right up until the very end. I'm sure even in the last couple of weeks of 343 Industries working on the game that there were some things still in flux. After all, it's only when they actually start implementing the music into the game that they really know how well things are working or not. But everyone's very professional – they know what they're doing – we can always take educated guesses if necessary. However, at the end of the day, it's only when you're actually sat there playing the game with the music in it that you really know.

"Another difference from film, everything was delivered as stems. They're essentially linear tracks written in such a way that they can be taken out of their linear pattern and certain sections can be looped so the team can take the tracks down in intensity and build them back up again. I tried to give them as much flexibility as I could, as many layers as possible and as much variation as I could come up with in the writing. From my point of view, there's a huge amount of trust that they will use the music in the way I intended it and make the most of what I've composed. But these guys are all at the top of their game. They've been working in this industry for many years. The music supervisor doing a lot of the actual implementation is even an accomplished composer in his own right. So I really do trust them. They've been a pretty inspiring team to work with." ■

Neil Davidge (above), has worked with musicians such as Damon Albarn, Unkle and Tina Dico

John Broomhall is a game audio specialist, composer, sound designer, session musician and columnist.
T: @BPLGameAudio
www.johnbroomhall.co.uk

18 April 2013, London

F2P summit

Save the Date!

After a sell-out event in September, the F2P Summit is back in London by popular demand on 18 April 2013 for more learning and networking.

What our delegates said about us:

"I found the F2P Summit to be really informative and useful and really enjoyed the day."
Nick Adams, Blitz Games Studios

"Great event. One of the best I've been to."
David Amor, Relentless Software

"The event was excellent again."
Ben Board, Microsoft

"The event was great and was very informative. There were a lot of big takeaways for us."
Dominic Matthews, Ninja Theory

Just some of the companies attending the last F2P Summit:

Aeria Games • Another Place Productions • AVM • Bee Square • Big Bit • Blitz Games Studios • BoaCompra • Boss Alien • Bossa Studios • Channel Four Television • Chaos Trend • Cohort Studios • Crytek UK • Curve Studios • Distinctive Developments • D R Studios • Erlang Solutions • Eurocom Developments • Eutechnyx • Evolution Studios • Exient • First Touch Games • Future Games of London • Future Publishing • Gameforge 4D • Gamesbrief • GlobalStep • Hasbro • Hired Gun • Hockshot • Hutch • InnoGames • Insight For Hire • king.com • Koolhaus Games • Kwalee • Littleloud • Lunatic Asylum Entertainment • Microsoft Studios • Mobile Pie • NaturalMotion • Ninja Theory • Onimobi • Palado • Pingflux • Playfuel • Rare • Rebellion • Relentless Software • Robot Riot • Sega • Sony Computer Entertainment • Sprung Studios • Stainless Games • Stryking Entertainment • Tangentix • Target Media • Team 17 Digital • transmedia storyteller ltd • Ubisoft • U-TRAX • Virtuos • WarChest • Xiotex Studios • Yager Development

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SERVICES SPOTLIGHT: Testronic Labs
p58

TOOLS SPOTLIGHT: Marmalade SDK
p60

TRAINING SPOTLIGHT: Norwich and Plymouth Uni
p62

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RECRUITER HOT SEAT

Fishlabs' Marc Morian gives you all you need to know about careers at Hamburg's rapidly expanding mobile developer

What are the benefits of working at a studio such as Fishlabs?
Fishlabs has been spearheading triple-A 3D mobile gaming since 2004, so we're veteran mobile mad men and women. Over the years we have built up unique know-how, which we are happy to share with new teammates.

Take our proprietary Abyss engine. In combination with evermore powerful mobile hardware, it has finally brought current-gen console quality within our grasp, as demonstrated by our flagship title *Galaxy on Fire 2 HD*. We hope our new team members will help us reach that goal and accompany us beyond to create increasingly immersive, story-driven experiences. So a great journey awaits.

On that journey, new team members will benefit from the reasonable size of our team as well as our flat hierarchies, open office structure and approach to development – all of which help to create a creative environment that will be particularly appealing to those disillusioned from working at giant gaming companies. Plus, you'll get the latest mobile gadgets to play, and great partners like Apple, Samsung, Nokia, Volkswagen, The Coca-Cola Company and more to work with.

How many staff are you currently looking to take on?
We're looking to fill about seven-to-ten positions, most of them for developers. As always, we've got several exciting projects running and a lot of great stuff in the pipeline, so all in all we expect to grow by another 20-to-25 across departments in 2013. Candidates should check fishlabs.net and sign up for our convenient jobs newsletter.

What perks are available to those working at the studio?
Thanks to Germany's worker-friendly laws, a lot of things that many others consider great perks are actually mandatory for us. Take paid vacation: In Germany, the legal minimum is 24 days per annum and the minimum at Fishlabs is even above that. Then, there is excellent medical care already built into the system over here. Add a pretty high-level of job security and overall work conditions and off you go.

That said, we also offer a host of voluntary benefits. No pool or gym, though. We leave it to other companies to burn their cash and would rather put our money elsewhere; such as into overtime compensation, though I've got to say that thanks to our excellent project management, crunch periods are rare at Fishlabs. I know everyone's claiming that one, but what can I say? It's true.

Once you have earned your spurs on projects, we also provide financial aid for professional and academic development. International applicants also receive support, financial or otherwise, regarding the acquisition of a working visa, relocation allowance, finding a suitable place to stay and learning German.

Location is sort of a perk, too, and Hamburg is a phenomenal city of approximately two million with a vibrant nightlife and close to Berlin and the sea coast. It's also been elected Europe's Green Capital 2011, so I assure you the widespread belief that Germany looks much like Mordor is wildly exaggerated.

> ***"I assure you, the widespread belief that Germany looks much like Mordor is wildly exaggerated."***
> Marc Morian, Fishlabs

What should aspiring developers do with their CV to get to an interview?
Nothing special, really: Include an overview of your formal education, a full list of employers and what you did for them exactly, all in chronological order. Also add information on your hard skills, such as familiar software and programming respectively foreign languages, including skill level. If you lack work experience, put in spare time or student games projects. Prove that you can't keep your hands off games no matter what.

To me the worst thing you can do with your CV, aside from omitting the mentioned must-haves, is putting in actual mistakes. How can I trust you to write thousands of lines of great code or check press releases if you can't spot the mistakes in your CV?

BIO
Name: Marc Morian
Title: Lead Recruiter
www.fishlabs.net

GET THAT JOB

Development specialists offer advice on how you can bag that career leap

THIS MONTH: PRODUCT MANAGER

"Communication is really important for product managers. You need to empathise with the players and understand the voice of the customer, but, at the same time, relate with the internal development team and the constraints that they are under. Being able to communicate that to the team is really key.

"You also need to be analytical and able to look at facts objectively, putting opinion to one side. A basic understanding of the core theory of statistics is also necessary.

"Finally, being a product manager is like being a small business owner – you have to identify opportunities and grab them while they're hot, so having that eye and that business mind is important."

Kevin Hogan,
Product Manager, Mediatonic

SIX-SECOND STUDIO SPOTLIGHT

- Based in Tampere, Finland, Prank Entertainment was founded in September 2010, by former production staff of Universomo
- With just six employees, creative director Seppo Santapukki says everyone is a 'key performer'
- Prank makes games for iOS, Windows 8/RT, Android and Mac
- The studio tries to bring something unique to the table or at bare minimum 'blow out the dust from a forgotten genre'
- It released its first game *Ant Raid* to critical acclaim, and plans to have another two games ready for the New Year
- Prank wishes to keep its team compact and carefully grow only when absolutely necessary

www.prankentertainment.com

I actually find the cover letter as important as the CV. Too often all I get is, "Hi, please find my CV attached". You've got to be an absolutely outstanding talent to get away with that. A great cover letter provides answers to five questions: Why games? Why mobile? Why Fishlabs? Why this particular job? Why you and not someone else? And don't forget: If you're an artist, game designer or writer, work samples are a must.

Who is the best interviewee you have ever had and how did they impress you?
To be honest, I can't think of anyone who's really stood out that much. Maybe I haven't been doing this long enough or maybe it's because we manage to screen candidates well enough so that everyone we invite is at a similar level. I hope it's the latter.

And who was the worst?
Same here. No memorable catastrophes so far. Lucky me.

What advice would you give for a successful interview?
Thoroughly research every aspect of our company, play our games and familiarise yourself with our mobile platform. Also, remember that hard skills are important but not everything. Your interviewers know they might have to work with you for a long time, so you've got to give them the feeling it's going to be a pleasant experience. Give the impression that the job you are applying for is the one you want most in the world. If you are multi-talented, don't imply you can't decide between all the jobs you can do. Convince us that you can do the job by clearly relating the things you've done in the past to the tasks that await you. Lastly, don't be afraid to show any shortcomings and don't even try to convince us there won't be any problems once you've started handling things. We're games developers. We know there will always be problems.

If your studio has recruited talent internationally, what was the process like? And what considerations should international applicants keep in mind?
Our process for national and international candidates is very similar. The first step for everyone more than half a day's journey away from Hamburg is a Skype video call. It's cost effective and convenient. We might then decide to have a second call and/or ask you to do a remote test. Next we'll invite you to Hamburg at our expense for a personal conversation. If we decide to make you an offer and you're from the EU, we'll assist you in your relocation and that's pretty much it.

If you're non-EU, we'll have to look into obtaining a work visa.

Aside from the potential visa issue, international candidates should keep in mind both cultural differences and climate. Sounds like stating the obvious, but candidates tend to underestimate these two factors.

NEW STUDIO ALERT!

SWALLOWTAIL GAMES HAS taken flight. Its young team of five picked up the 2011 Dare to Be Digital honour and BAFTA Ones to Watch Award this year. Afterwards, Swallowtail chairman Sophia George (*center*) says she received emails from a "couple big publishers" that seemed interested in helping her team bring its game to market.

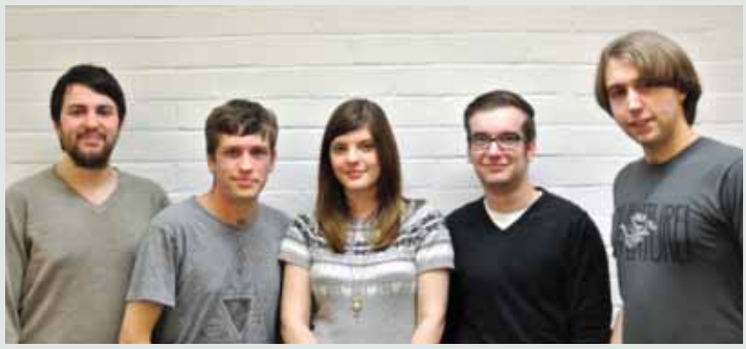
"We applied to the Prototype Fund from Abertay University as way of funding the project and our potential business. Getting the funding was incredibly valuable as it has allowed us to work on the project full-time," she says. "We decided that the benefits of self-publishing could potentially outweigh those of having a publisher, so we decided to do it ourselves."

Tick Tock Toys, a colourful puzzle game for iOS and the title that earned the studio its awards is Swallowtail's first project, and is set to arrive in early 2013.

"I make it a strong personal goal of mine and the company, to develop games that will appeal to everyone," says George, who is also an artist and designer at the studio. "However, I find it particularly important that our games will appeal to women, as this industry is so male dominated that I often feel like women are treated as an afterthought. It will be refreshing when we see games for women that are not about babies, ponies and rainbows."

Swallowtail is currently based in Dundee at Abertay University.

George says the company is currently looking for contract work or further funding in order to keep going, and has positive hopes for its first title: "We intend to build *Tick Tock Toys* into a well-recognised and popular brand that we can continue to create content for by adding new themes and mechanics."
www.swallowtailgames.co.uk



MOVERS AND SHAKERS

This month: This month: Rare, Lincoln Beasley, Realtime UK and Serious Games International

RARE British developer Rare recently hired **DREW QUAKENBUSH** (*pictured left*) in a new senior leadership role as studio operations director. His role will be supporting the studio through its next stage of evolution in achieving its range of aspirational strategic goals.

Canadian by birth and new to the UK after a three-year tour at Ubisoft France, he has shipped games across the globe. High-profile franchises that Quakenbush has worked on include *Just Dance* and *Tintin* for Ubisoft and, prior to that, *Madden* and *Fight Night* among others during his time as director of development at EA Canada.

"I'm very pleased to be joining a studio with such a rich tradition of building creative and compelling games," said Quakenbush. "I am excited by the challenge of our evolving industry and the possibilities that are there for us."

Rare has also hired **CHRIS BORE** (*pictured right*) as a principal visual effects artist. He spent six years covering medical visualisation, TV commercials and feature films, and claims that his most memorable experiences so far came from working in film. Chris believes he's joined the games industry at a point where the hardware is starting to match up to what people expect from a video game. He feels that, once seen as an afterthought, something to be thrown in at the last minute, visual effects is now positioned to take centre stage.

LINCOLN BEASLEY Games PR agency Lincoln Beasley PR & Marketing has taken on former Blitz Games Studios' head of PR **NATALIE GRIFFITH** as a new director. Natalie joins managing director Alison Beasley to help manage the agency's growing roster of clients, following 12 years at Blitz where she headed up the studio's corporate, product and internal PR and marketing activities.

Her career in the games industry has spanned over two decades and included five years as editor of Official Nintendo Magazine Australia and two years at Codemasters.

"I'm thrilled and humbled to be working alongside such a well-respected PR professional as Alison, and am looking forward to supporting our inspiring and varied line-up of games and technology clients," said Griffith.

Beasley added: "I'm delighted to welcome Natalie to Lincoln Beasley. Her breadth of experience, coupled with her in-depth knowledge of games development and all-round enthusiasm for the sector makes her the perfect choice to help me add extra capacity for our existing clients as well as grow our client base further. I'm really excited about this new chapter."

Lincoln Beasley PR in Oxfordshire represents several award-winning developers and technology companies, such as David Perry's Gaikai, Frontier Developments and Digital Capital. The agency also undertakes pro bono work for charitable enterprises OneBigGame and Special Effect.

REALTIME UK Video production outfit Realtime UK has hired seven senior and junior members of staff.

MARK WILKS (*pictured left*) joins as a senior environment artist. He has worked at numerous games companies, including THQ, Reflections and Midway Games.

DANIEL FOX (*right*) is a new modeller with two years experience working for Microsoft Studios. Fox gained a BSc Hons degree in Multimedia Technology and Design at the University of Kent before progressing on to a Masters in Digital Visual Effects. Other new starters include senior CG generalist Cristian Scubli, pipeline TD Nick Moutafis and producer Shamsher Walia.

"It's a really exciting time for Realtime UK and we're delighted to be opening an additional studio in Manchester and to be expanding our team with more talented individuals," said Realtime UK MD Tony Prosser.

"Now in our 17th year, it's great to be able to share our team culture and expertise with new talent and to be building a larger organisation that is able to create large scale projects at the same time."

SERIOUS GAMES INTERNATIONAL Serious Games International has bolstered its team with the addition of Mark Stanger, **PAUL RANSON** (*pictured*), and other senior academics.

Stanger has been appointed as commercial director. He brings 20 years experience in games with him.

Ranson is now development director of SGI's creative studio. He was formerly MD of Slam Productions and also worked at Codemasters. SGI has also hired Gary Knight as a content and branding consultant, Felix Bradshaw to lead business development and Mark Cottam to head up its new US office as VP of development and operations.

"The team that we're building here will work with our colleagues in academia to bring a fresh but proven perspective to the business of applying games techniques to serious software solutions," said Tim Luft, MD of SGI.

Service & Tech Hot Seat

The Trailer Farm's creative director **Tony Porter** discusses what this video production duo can offer your studio, and offers insight into what work in the trailer business entails

What makes the Trailer Farm different from other video makers?
I guess this is where our main USP shines through. Unlike other agencies, we are exclusively working in the interactive sector.

Our core team has a rich heritage in games development and marketing, which really resonates with our clients, and ultimately the gamers themselves. Our processes, pipelines and production methods are 100 per cent tailored towards video game promo work.

At the Trailer Farm, we're all about using your game, along with smart ideas and outstanding motion design, to create the perfect trailer. We draw heavily on both our marketing and games development background when creating our work.

Briefly describe your video promo development process?
Well, any trailer starts with the creative brief. This is followed by a flurry of activity and creative sessions, culminating in a visual pitch to the client. We're all passionate about games here, so it's really important that we spend time actually playing the game, immersing ourselves in the product and demographic.

Capture time is a crucial part on game trailer production. This is where we probably differ from most promo agencies. Crafting compelling in-game sequences that make the cut are what makes an amazing trailer.

Again, our main USP comes into play here. Game capture is a real art, both creatively and technically, this is what we love to do.

Trailer Farm is now offering services specifically for mobile and indie developers. What aspect of your production will differ?
We're very excited about this new service. Alongside triple-A console trailers, we are now opening a second division, Trailer Farm Indie. This will exclusively offer trailers to all indie developers and publishers out there for iOS, Android and PC.

This is really due to popular demand, and we intend to offer quality trailer services in a cost-effective way that suits the budget of an indie developer.

We feel that now more than ever, it's crucial that you have effective marketing material to accompany the launch of your game. The aim is to take all of our triple-A trailer production values, techniques and pipelines and apply them here. We've already produced several of these and the feedback has been phenomenal, resulting in reported uplift in sales; which is, of course, the goal.
www.thetrailerfarm.com

Photography: Evelina Gustavsson

Massive Entertainment

Malmö, Sweden
www.massive.se

Nothing says 'we mean business,' like a wall chocked with guns. Fitting for the studio behind *Far Cry 3*'s multiplayer. Other than replica weapons, magazine covers of its titles and character concepts decorate the walls.

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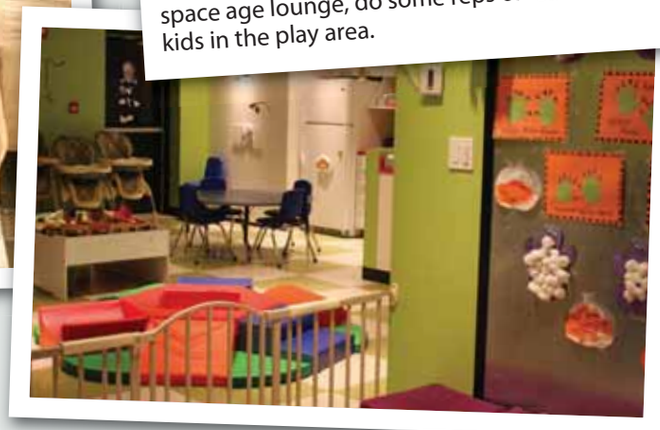
Nova Scotia, Canada
www.hb-studios.com

When the time comes for a well earned rest – or cheeky extended break, HB has the trimmings to satisfy. Shoot some pool in its space age lounge, do some reps or leave the kids in the play area.



SERVICES SPOTLIGHT

This month: **Testronic Labs**

TESTRONIC LABS IS a testing, quality assurance and localisation outfit that has been operating for over 10 years. It has facilities in London, LA, Diepenbeek and Warsaw. The company focuses on what it believes games developers and publishers need to in order to create polished productions. Namely, an acute user experience, functionality, compliance, compatibility and language testing services.

"We've defined a high standard of testing in these areas for a long time," says Testronic's vice president of games operations and London site manager Alastair Harsant. "But, more than just a list of what we do, the core difference is our focus on service and quality."

That approach, Harsant asserts, along with understanding its customers and the environment in which they operate, is the important part of a successful client-supplier partnership.

He explains that Testronic like to keep the process as simple as possible for developers. Its approach hinges around ensuring that, before it supplies any service, it understands what the client needs are and then makes sure that it is in a position to meet or exceed them.

"We are not afraid to say no if we think we are not confident in delivering what is needed," says Harsant. "So it is an ongoing balance between simplicity, common sense, process, as well as acting as a team unit – between the operations, recruitment and sales departments. So far the formula is working well for us."

> ***"We have a firm eye on training and developing our staff – a tough area given the unpredictable nature of forecasting work volume and client needs."***
>
> Alastair Harsant, Testronic

Over the years the outfit has worked on many console-developed games. However, its portfolio now includes an increasing number of handheld and mobile games. A selection of titles it has

Testronic Labs' Poland branch, (far right) London site manager Alastair Harsant

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worked on include *Deus Ex*, *Uncharted*, *Gran Turismo 5*, *Kingdom Hearts*, *Angry Birds*, *League of Legends*, *Dead Island*, *Batman: Arkham Asylum*, *Marvel vs Capcom* and *Bejewelled*.

As the depth of experience needed across games, platforms and deliverables changes, Harsant says it will likely be solely external resources that can meet the requirements. Testronic's depth and breadth of experience, evolving tools, varied perspective, access to testing methods outside of direct games testing and its investment in trained permanent teams are reasons developers should choose them, he says.

Furthermore, the increasing number and sophistication of games, along with the growing expectations of the end users means there is huge pressure to deliver and have a decent ROI. Therefore, Harsant is aware that "getting it as 'right' as possible first time is critical".

Testronic plans to continue investing in its existing personnel, sites and tools to keep it at the top end of games testing quality. And it is also looking to expand next year.

"We are developing services for the future, often involving our non-game service line colleagues," says Harsant. "We also have a firm eye on training and developing our staff – a tough area given the unpredictable nature of forecasting work volume and client needs. Our ability to take care of our customers and take responsibility at all levels is really important to us. The saying goes: your company and products are only as good as your people. Testronic Labs has great people working for it."

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TOOLS SPOTLIGHT

This month: **Marmalade**

MARMALADE WAS FOUNDED on the premise that more platforms means more possibilities. And the company's eponymous SDK has been doing precisely that, helping thousands of developers bring their applications to a medley of mobile and handheld platforms since its arrival.

Marmalade SDK was launched in 2009, originally under the name Airplay. The SDK enables developers to rapidly deploy games and apps for native performance on every device, which spans mobile, desktop and smart TV platforms, making for efficient cross-platform development. What makes it different to that of other cross-platform SDKs is its flexibility.

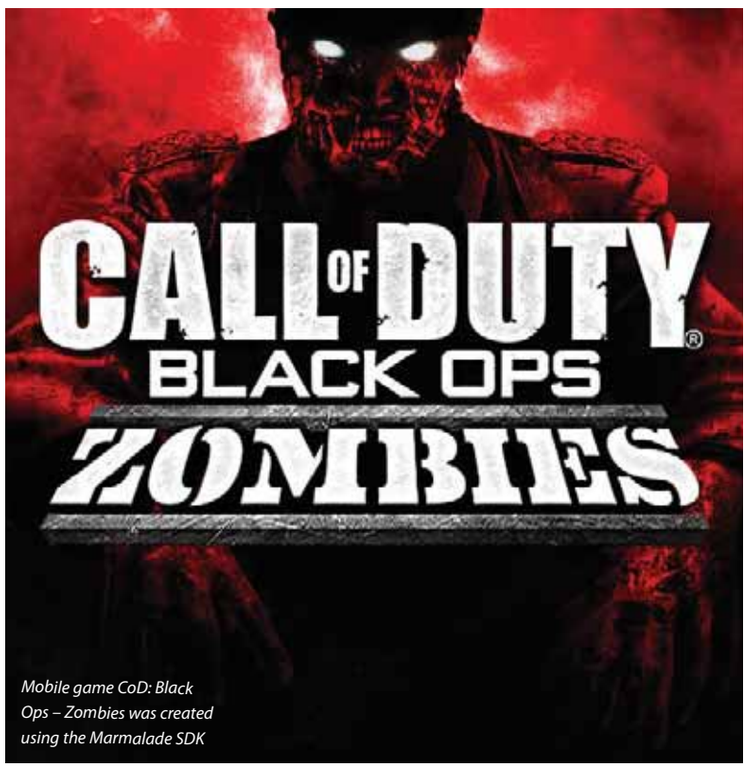
Marmalade head of developer support Lester Madden says that the strength of the tool lies in its basis as a cross-platform SDK that does not restrict developers to a subset of a platform's functionality.

"Using Marmalade, developers are able to build applications that take full advantage of a platform's features," he says. "Once the developer is ready to deploy, they can target multiple devices with a single click."

Marmalade integrates with common developer tools, such as Microsoft Visual Studio and Xcode from Apple. Thanks to this approach, developers are able to build applications in either C++ or HTML5 without having to master another development environment. They can also take advantage of tool features, such as debugging support, and Marmalade's "thriving developer community" building open source extensions, which allow other developers to plug-in functionality for new services.

Some of the mobile games Marmalade has been used to develop include *Call of Duty: Black Ops – Zombies*, *Need for Speed*, *Pro Evolution Soccer*, *Cut the Rope*, *Plants vs. Zombies* and *Draw Something*.

In September, Marmalade deployed support for Windows and Mac desktop environments, meaning that developers can take the same game compiled for a mobile device and quickly deploy it to the desktop. An updated version of the SDK now supports iOS6 and iPhone 5, as well as some updates for BlackBerry and ARM version defaults.



Mobile game CoD: Black Ops – Zombies was created using the Marmalade SDK

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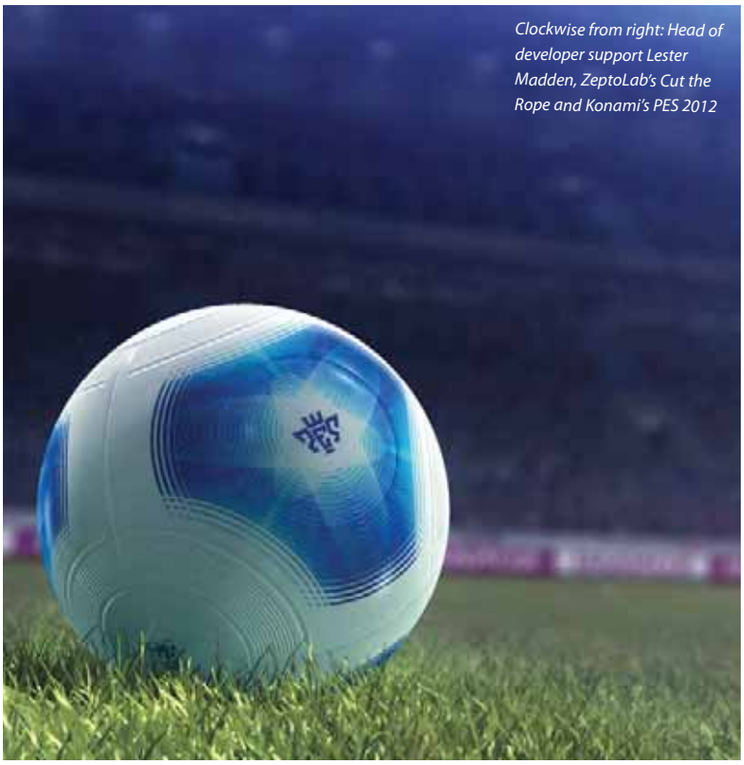

Clockwise from right: Head of developer support Lester Madden, ZeptoLab's Cut the Rope and Konami's PES 2012

Looking forward, Madden says: "We're constantly updating Marmalade to make sure it's compatible with the latest platform requirements, so developers can target the widest range of development platforms and devices possible."

Marmalade intends to support Windows Phone 8 by the end of the year, with full desktop and tablet support coming in early 2013. With this upcoming support for Windows Phone 8, developers will be able to create high performance games and apps leveraging their C++ and OpenGL ES skills, with opportunities to bring their titles to iOS, Android, BlackBerry as well as other Windows platforms. The latest version of the SDK now supports iOS 6, with Windows following in the 6.2 release. Marmalade is also working on a couple new platforms and technology projects that are due to be announced.

In summary, Madden says: "We pride ourselves on being a developer-led company, and we understand that developers want to make their apps available to the widest possible audience, as quickly as they can."

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"After some years working as a programmer, I decided to attend the MSc in Games Programming at Hull University. It was probably the best investment of my life. Now I'm a programmer at an AAA studio." Manuele Bonanno, MSc Graduate

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TRAINING SPOTLIGHTS

Clockwise from left: character art by Ryan Pentney, students in NUCA's media lab, art by Vin Hill and a student animating

Norwich University College of the Arts

NORWICH'S HISTORY IS steeped in art and culture, which might explain why Norwich University College of the Arts has become a hotbed for interactive development and digital production.

The college was recently certified by the Creative Skillset, the industry body that supports skills and training for people in the creative industries – making it one of only ten other higher education institutes in the UK offering accredited courses.

"The Skillset accreditation confirms that our course is providing gold-standard academic education and skill-based training for graduating games artists and designers," NUCA course leader Marie-Claire Isaaman (*pictured inset*) tells *Develop*.

And that's not the only recognition it has received. Alumni from the university went on to win the 2011 Dare to be Digital competition for their iPad game *Tick Tock Toys*. Those students have gone on to form their own company, Swallowtail Games (*see page 55*).

The curriculum focuses on developing strong technical skills in art, design and technology for the sector whilst also introducing an intelligent, questioning approach to considering the art and creative form of games.

The BA Games Art and Design course deliveries an integrated programme of theory and practice. Students are encouraged to develop strong communication skills in pitching, presenting ideas and projects as well as evolving skills in team work, an essential for working in any game studio. To start with, students are introduced students to fundamental questions: what are games, defining gameplay and history of games? This is coupled with introductions to core areas of games art, design 3D modelling, animation and level design.

In the second and third year, there is an increased emphasis on professional practice as students develop understanding of game design communications, prototyping, testing and the game development pipeline for a range of studio models. They also research roles and media practices to identify their own career pathway into the industry. They work on a final year project and research report, intended to demonstrate high levels of theoretical knowledge of games combined with digital craftsmanship and in-depth understanding of the techniques and processes. All students have portfolios, showreels and websites developed to a professional standard before leaving the course.

The course has close relationships with the with studios such as Sony, Sumo Digital, Media Molecule and Crytek, and also works closely with TIGA, UKIE and WIGJ.

When it comes to resources, students has access to 2D and 3D art packages, level editors, such a CryEngine, Unity and Unreal. Students are also encouraged to get creative with open source packages, such as GameSalad, Stencyl and GameMaker.

Isaaman and her staff will continue to respond to sector shifts and strengthen the course by working even closer with successful games studios on projects and mentoring programmes. Create links not only in the UK but in Europe and worldwide.

Isaaman believes that higher education is playing a crucial role in the expansion of games in ou culture.

"Education is different from games software training," she says, when asked about games education and her part in it. "It is an entire experience ranging from learning about the history and semantics of games through to traditional drawing and complex digital tool skills. Further, the educational experience nurtures talent and a positive attitude to networking, social media, project communication and team work.

"Both educators and students can potentially provide the games sector with a wealth of original research that commercial studios don't have the time or budgets for. By working together it may be possible to develop complex, fresh ideas that will innovate the sector."

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Students using one of the many well-stocked hardware rooms in Plymouth's games suite

Plymouth University

IF THE THOUGHT of experimenting with the latest console hardware, AR drones and heart rate monitors doesn't hook you, Plymouth University even has an in-house development team.

Located in Britain's popular South Western region (*see Develop #132 for more*), Plymouth University's BSc (Hons) in Computer and Games Development is accredited by the British Computer Society.

Dr Dan Livingstone (*pictured inset*) is the course's programme manager and tells *Develop* that the course is rooted in an "indie ethos" and has a track record in initiating start-up companies in the sector.

"Students learn a design process, generate ideas, pitch, specify, design and build, quality assure and deliver a prototype following the model our own in-house development team use," says Livingstone about Interactive Systems Studio, which works on internal and external projects, intending to pass on its collective skills and experience to Plymouth's students.

From day one, students learn to code, starting with C# and moving on to DirectX and C++ . Their first challenge is to deliver a game for Kongregate or a similar portal, which is intended to introduce core gameplay fundamentals as well as various revenue models. The course continues in this vein in its second year with a substantial Unity project and some mobile applications and tech demos geared toward building a useful portfolio and versatile skills. In the final year, students form a mock company and create a large-scale project, typically in Unity or a custom interactive system.

Students have access to a broad assortment of development tech and tools. The course offers all three major operating systems – OS X, Windows and Linux and runs its own servers. Full Adobe Web Suite, Unity, Visual Studio, numerous SDKs and a host of third-party packages are also promised. As is an assortment of peripherals from arcade sticks to the latest gesture and touch-based interfaces.

Plymouth has a network of graduate companies and industry veterans who contribute guest lectures, mentorship and who also recruit students for live projects. The university is also a sponsor and active participant of the ExPlay festival, fielding a team for the events development awards.

Livingstone is keen to say more about its approach.

> ***"The sector is evolving very fast and academic institutions typically move very slowly so it is hard to meet expectations."***
>
> Dan Livingstone, Plymouth

"We practice what we preach," he says. "Our in-house team made three game prototypes in 24 hours for TIGA Gamehack at Pinewood Studios earlier this year, collaborating with local developers from the ExPlay network and ensuring Plymouth was well represented at the London event."

Livingstone aims to keep the course agile, fun and enterprising. Even as the sector evolves, Plymouth has moved with it, recently adding mobile security and real-time processing strands.

"There is a danger of being pigeonholed," Livingstone ponders. "There are approximately 200 courses with games in the title on UCAS, and new courses seeking approval across the country. At the same time David Braben and others have lamented the fact that many of these courses simply don't deliver the skills industry needs.

"The sector is evolving very fast and academic institutions typically move very slowly so it is hard to meet student expectations and industry demand. I think we have a good balance, this makes for a tough course with a 'work hard, play hard' ethic. That's the best way to learn."

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CODA

A sideways look at the games industry

THE INDUSTRY IN 140 CHARACTERS

A month in tweets by the industry elite

@IGLevine
Shout out to all the nerds in New York getting their power back on. We lost power a day or so, and even that was too much of no *XCom*.
(Ken Levine, Irrational Games)
November 3rd

@davidscottjaffe
Clearly I am behind the times as I'm just now getting to play *Halo 4*. Just got done w/about an hour of MP and it's DAMN FANTASTIC! So fun!
(David Scott Jaffe, studio name TBC)
November 13th

@TimOfLegend
Biggest technical inaccuracy of *Wreck-It Ralph*: there is an arcade in it that's still in business.
(Tim Schafer, Double Fine)
November 3rd

@steishere
10,000 tweets. Space for 1,400,000 characters. Maybe 275,000 words. Could have written three novels. This account is now my legacy.
(Ste Curran, Secret Crush)
November 15th

@krispiotrowski
Nintendo games & consoles are just different, ya know? Part of it is nostalgia, sure. But a bigger part of it is craft and philosophy.
(Kris Piotrowski, Capybara Games)
November 8th

@danthat
The best thing they could do for #GTA5 is an app that turns my iPhone into a Los Santos Sat-Nav. Surely they're doing that?
(Dan Marshall, Size Five)
November 20th

@lemmy101
If you're a designer who builds game concepts around microtransactions you're a businessman trying to make money, not a designer. Sorry!
(Chris Simpson, TheIndieStone)
November 9th

@LadyShotgunGame
I might change my name by deed poll to Peter Molyneux & launch a Kickstater for our next project :)
(Anna Marsh, Lady Shotgun)
November 22nd

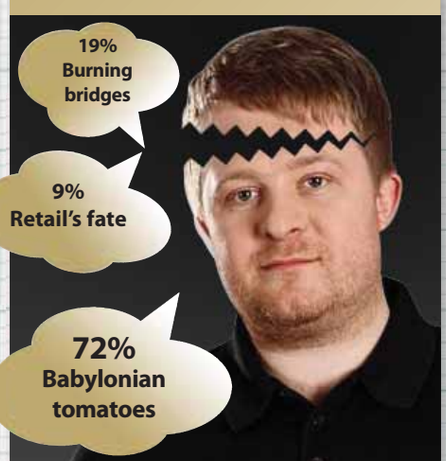
@pmolyneux
The coders here at 22cans did another 36 hour marathon. We now have hugely improved servers *#Curiosity* is starting to behave like it should.
(Peter Molyneux, 22 Cans)
November 13th

@llamasoft_ox
I mean yeah, I'd love a couple of hundred grand to do my T2K remake. But I'd stand no chance as the already rich have taken it all.
(Jeff Minter, Llamasoft)
November 23rd

AN OPEN MIND

VICTOR KISLYI

The man at the top of huge MMO outfit Wargaming.net lets rip with his views on retail, free-to-play and the selling of vegetables in ancient times



Speaking to *Develop's* sister magazine and bible of the games retail business *MCV* about binary coding and the power of free-to-play: "Games are digital products. They're zeros and ones. Yet we're still selling them in physical boxes on shelves. That is the exact manner that people were selling tomatoes 5,000 years ago in Babylon."

Moving on to discuss how sensible it can be for a studio to cut its ties with the games industry's old world order: "We released a handful of titles at retail. We barely survived. It was a risky but right decision for us to burn bridges with retail and go digital."

Finally, Kislyi's none-too-optimistic prediction for the future of games retail on high streets across the globe: "Games retail will die off, whether we like it or not."

IT FIGURES: STEAM

Valve's online games service Steam has amassed more than **50 million** users, Sega's VP of digital distribution John Clark claimed at London Games Conference **2012**. Meanwhile Steam's Big Picture mode beta has grown to **500,000** subscribers since its launch **three** months ago. Elsewhere Steam Workshop has garnered more than **300,000** items, with a total **106 million** community contributions. And as November drew to a close, Valve invited **5,000** additional users to beta its digital distribution platform on the Linux operating system. The private external beta for Steam on Linux began in October **2012**, where **1,000** testers were selected from a pool of over **60,000** applicants, granting them access to Linux Steam, **one** Valve game, and support for Ubuntu **12.04** and above. A team of **11** Valve staff are at work on the Linux version of Steam.

THE DEVELOP DICTIONARY

Our guide to games development terminology brings you the best and the worst of industry jargon. This month we bring you the letter E

Easter Egg – *A hidden element – such as a joke, item or character, and sometimes a game in its own right – hidden in the playable parts of a release, and often accessible only through a convoluted sequence of actions. Often Easter Eggs are so subtle as to go unnoticed by the player, and typically they refer to developer in-jokes.*

Edutainment – *Once upon a time it was a well-intended term to describe games that combine education and entertainment. Now it's a catch-all term for titles that strive to combine the two elements with little grace or nuance. It's also a term those trying to make good quality educational games like to distance themselves from entirely.*

Emergent behaviour – *The actions taken by an AI-based NPC that are a result of its interactions with other game elements, giving it unpredictable movement and behavioural characteristics*

Emergent gameplay – *Methods of interacting with a game that are outside of the title's intended use. In other words, a player's own take on how to interact with a game.*

Emergent storytelling – *The loosest of all the 'emergent' games development terms, this refers to the unreadable process of a narrative and story forming in a given player's imagination, arguably beyond the control of the original creator.*

Emulation – *Classically, the ability of one system to ape the behaviour and function of an other. In the consumer's minds, it refers to a way to – possibly illegally – play arcade and retro games.*

End user – *The customer, player, gamer, fan, consumer. That person the industry has dehumanised with so many pieces of cold terminology so as to make them a neat target for marketeers.*

Engine – *Most commonly and most simply, the technological core around which a game is built, or a complete toolset that allows the creation of a game. Also refers to a system of software that serves a specific function within a wider development environment, for example, handling graphics or AI.*

Error code – *A number given during a software or system failure that might be listed somewhere on a tech forum that might just be of some use when you're working late into the evening.*

Euro – *A prefix for game genre classifications that suggests a Western-made clone of a characteristically Eastern game type. Typically carries a negative implication, suggesting an ungainly realisation. For example, Euroshmup.*

Exploit – *A piece of design that allows the player of a given game to exploit a mechanic for their own good in a way deemed outside the rules of game. Sometimes exploits are implemented intentionally by a games developer; sometimes they are unintentional loopholes discovered by end users.*

Extrusion modelling – *A polygonal modelling technique whereby a 2D image is made 3D by having its edges extruded.*

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FEBRUARY 2013

RECRUITMENT SPECIAL
Our annual look at the jobs market includes advice for CVs, portfolios and interviews; guidance on promotions; and more

SALARY SURVEY
Having pooled data from hundreds of professionals across every facet of the industry we bring you the results of our most far reaching survey yet, and analyse how salaries are changing

SMART TV
As the entire entertainment industry circles around the new generation of web-connected televisions, we explore what matters to games developers looking at the platform

REGION FOCUS: HAMBURG

EVENTS:
Casual Connect, Hamburg – February 7th to 9th

MARCH 2013 (GDC show issue)

CONSULTANCY SPECIAL
Can independent advice really be worth the consultancy fee? We ask studios with experience, and seek advice on getting the most from consultancy straight from the source

BUILD SPECIAL FOCUS: GAME ENGINES
From the triple-A giants to the bedroom coding upstarts, we round-up the engines keeping games development motoring

BUILD SPECIAL FEATURE: DISCOVERY AND DISTRIBUTION
With more new platforms to consider than ever before, the discoverability challenge is greater than ever. Experts offer insight into getting your game noticed

REGION FOCUS: CANADA

EVENTS:
GDC, San Francisco – March 25th to 29th

APRIL 2013

LOCALISATION SPECIAL
With an increasingly sophisticated global marketplace, the pressure is higher than ever to reach audiences in their first language. We speak to the firms making that happen

REGIONAL FOCUS: CHINA

EVENTS:
Festival of Games, The Netherlands – April 23th to 25th

MAY 2013

THE FUTURE OF GAMES AUDIO
A fresh examination of music and audio for the games sector, from in-house teams and hardware to outsourcers

BUILD SPECIAL FEATURE: QA
How teams that stamp out bugs and ensure you pass certification work – and how to get the most out of them

EVENTS:
Nordic Game, Malmo – May 22nd to 24th
Develop Quiz, London nnnn- May, final date TBC

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THE FAQ PAGE: ROGER DEAN

Develop grills respected figures from the global games industry

Photo credit: Jason Azze

Roger Dean's work has made him famous as an album cover creator, furniture designer, architech and video games designer

Who are you are and what do you do?
I'm Roger Dean, and I'm a designer. My early work was designing architecture and furniture. I had a very successful exhibition with a chair called a Sea Urchin Chair when I was a student. My first job after leaving college was to design the seating at Ronnie Scott's Jazz Club, and from there I was asked to do an album cover for Ronnie Scott, or rather a pop group called The Gun, who were under Ronnie Scott's management. As a consequence of that, which went down quite well, I was asked to do a lot more. Eventually that lead to the Asia and Yes album covers. The Gun was in 1968, and it was probably two-and-a-half years after that before I got around to doing stuff for Yes. And eventually I worked on games, designing worlds and packaging and many other things.

What are you working on right now?
I have a lot of projects in the wings, as it were, waiting for planning consent or funding or stuff like that. They include two films – one of which I think we'll be working on soon which is a view of the future based on a great book called *An Optimist's Tour of the Future* by Mark Stevenson. We're working on a spa and holiday village project, and I've been asked to work on a world for a computer game, *Dragon's Dream*. In fact, I would say I've got at least two computer games where I've been asked to head up the team that does the world, the architecture and the characters. The theme seems to be designing worlds and cultures. And I'm just finishing an exhibition of my work. It's a busy time.

> ***"The first game I ever worked on was Brataccas, with Psygnosis. That was followed very quickly, as it happens, by working on a version of Tetris."***

What was the first game you worked on?
I was asked to do a project for Imagine, but that never happened, and by the time I talked to the guys again they were founding Psygnosis. So the first game I ever worked on was *Brataccas*, with Psygnosis. That was followed very quickly, as it happens, by working on a version of *Tetris* with a man named Henk Rogers, who had a company called Bullet Proof Software based in Japan. It subsequently became Blue Planet Software.

What was the first game you ever played? Did you enjoy it?
Well, despite what I just said, we designed cabinets for arcade games early on. We were considering developing games ourselves, and we weren't thinking computer games; we were considering arcades. We designed some cabinets, and we were in the middle of licensing games. The cabinets were very easy for us to create, but with the games we didn't really have a clue of how to go about it, but we did have friends who felt they were on the cutting-edge of developing games. So we started manufacturing cabinets and Taito Electronics, before we got very far, bought us out. That was at the very beginning, before anything else.

Back then we were playing two games I almost can't remember. *Galaxian* was one. They looked like knitting patterns, but I was beguiled immediately.

What is your favourite game ever, and for what reason?
I always liked those very, very primitive games from right at the beginning; they were incredibly simple, but nevertheless amazingly addictive. I used to speculate then about what it would be like in a few years time when the imagery got stronger. We used to waste so much time on those games. We used to waste too much time, because we had the prototypes in the office around us. Back then I had to say 'enough is enough' and stop myself from getting to involved there. And I still find the same today with other games like suduko. If I start something like that, I could have done a book before I stop. But I can't remember the names of those early games. There was *Galaxian* and two others we had in office back then.

I did try other things. I played *Myst*, and was approached by the guys who developed that. Everything about exploring an unknown place is fascinating, and playing those games gets you twitching in your sleep, they're so fascinating. I loved those simple games. I couldn't look at a paisley jumper back then without seeing patterns moving across it.

What was the last game you played, and did you enjoy it?
I actually made it a policy to stop, because games were so addictive, so I don't play them. I literally don't. I've never played a game on my computer, and I'm careful if we have something around like *Tetris*, but I don't play them. I've not bought a game for ten or 15 years, so it's been a long time. The last game I played, then, was *Tetris*.

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